

# LEATH & ROSS'S HOMEOPATHIC PHARMACIES

9 VERE STREET, W.,  
and 5 ST. PAUL'S CHURCHYARD, E.C., LONDON.

ESTABLISHED 1835.

TRADE NOTICE—10 % Discount for Cash with Orders.

OUR £4 4s. AGENTS' CASE,

Contents realise £7 5s. 3d.



Upwards of 1,600 of these Cases have been sent out.  
DIMENSIONS.—Length, 19 inches; breadth, 16 inches; height of front, 3½ inches;  
height of back, including flap, 11 inches.

## WHOLESALE PRICE LIST OF MEDICINES PUT UP READY FOR SALE.

		TO ACCOUNT.	FOR CASH.			TO ACCOUNT.	FOR CASH.
TUBES.—	Sixpenny Tubes ...	3/0 doz.	2/9 doz.	PILULES.—	Sixpenny Bottles ...	3/0 doz.	2/9 doz.
	Ninepenny " ...	4/8 "	4/1 "		Ninepenny " ...	4/8 "	4/1 "
	Shilling " ...	6/0 "	5/5 "		Shilling " ...	6/0 "	5/ "
BOTTLES.—	Sixpenny Bottles ...	3/0 "	2/9 "	TRITURATIONS.—	Sixpenny Bottles ...	4/0 "	3/7 "
	Ninepenny " ...	4/8 "	4/1 "		Ninepenny " ...	4/6 "	4/1 "
	Shilling " ...	6/0 "	5/5 "		Shilling " ...	6/0 "	5/5 "

Liberal supply of printed matter to Agents, also Showcards, Transparencies, &c.



# 14 PRIZE MEDALS,

Including Highest Awards at New York, 1874; Philadelphia, 1876; Paris, 1878; International Medical (London), 1881; and the Healtheries (London), 1883.  
The only article which has received any official recognition anywhere.

## PETROLEUM "VASELINE" JELLY.

**"VASELINE"** differs from the imitations offered and substitutes, in that it is made from a different base (American Crude Petroleum) and by a different process, and no acids are used in its manufacture. It is not a distillate, contains no paraffine, is not crystalline in its structure, and does not separate upon cooling, after being heated indefinitely. It is simply a concentrated Jelly of Petroleum, purified by repeated filtrations through bone black.

To compare "Vaseline" with a *distillate* of Petroleum is equivalent to testing the quality of butter by experimenting with cheese.

**CAUTION.**—The word **"VASELINE"** was originated by, and is registered all over the world as the Trade Mark of this Company for their Emollient, Remedial, Toilet, and other preparations of Petroleum; and the Trade Mark are cautioned against using the said word in connection with any goods not manufactured by us.

Reference is asked to notice of judgment obtained by this Company against infringement of their Trade Word, "Vaseline," published in THE CHEMIST AND DRUGGIST of December 14, 1884, and previously.

Also to the Circular in January issue (facing page 164), which gives the exact style of the genuine packages of the Medicinal, Toilet, and Household Preparations.

### CHESEBROUGH MANUFACTURING CO. (NEW YORK)

41 HOLBORN VIADUCT, LONDON, E.C.

SOLE MANUFACTURERS AND PROPRIETORS OF THE "VASELINE" PREPARATIONS

# FLETCHERS' Concentrated Liquors.

Universally acknowledged by Pharmacists who have them in use to be the most Simple, Efficient, and Economical of all methods for preparing Syrups.

## LIQUOR Ferri Iodidi.

*EACH* fluid drachm contains 34.4 grains of Iodide of Iron.

*ONE* volume added to seven volumes of *Syrupus*, *B.P.*, forms Syr. Ferri Iodidi of full Pharmacopœia strength.

## Liquor Ferri et Quiniæ et Strychniæ Phosph.

*EACH* fluid drachm contains 4 grains of Phosphate of Iron, 4 grains of Phosphate of Quinia, and  $\frac{1}{8}$  grain of Strychnia.

*ONE* volume added to three volumes of *Syrupus*, *B.P.*, forms Easton's Syrup.

## LIQUOR Calcis Lactophosph.

*EACH* fluid drachm contains 8 grains of anhydrous Calcium Phosphate combined with Lactic Acid.

*ONE* volume added to seven volumes of *Syrupus*, *B.P.*, forms Syr. Calcis Lactophosph.

## LIQUOR Ferri Phosph.

*EACH* fluid drachm contains 8 grains of Ferrous Phosphate.

*ONE* volume added to seven volumes of *Syrupus*, *B.P.*, forms Syr. Ferri Phosph.

## LIQUOR Ferri Phosph. Comp.

*EACH* fluid drachm contains, in addition to the alkaline Phosphates, 4 grains of Phosphate of Iron, and 8 grains of Phosphate of Calcium, dissolved in pure Phosphoric Acid.

*ONE* volume added to three volumes of *Syrupus*, *B.P.*, forms "Chemical Food."

## LIQUOR Ferri Hypophosph.

*EACH* fluid drachm contains 8 grains of Hypophosphite of Iron.

*ONE* volume added to seven volumes of *Syrupus*, *B.P.*, forms Syr. Ferri Hypophosph.

On receipt of a Post Card, trial samples will be sent, carriage paid, to any address.

Detailed List, containing prices and particulars of upwards of thirty different combinations, post free on application.

FLETCHER, FLETCHER & STEVENSON,  
Holloway, London, N.



# ECONOMICAL COFFEE FOR THE MILLION CONVENIENT



Forty large Cups of delicious Coffee made without trouble, for One Shilling, by using

## SYMINGTON'S ESSENCE OF COFFEE AND CHICORY

*Prepared from the finest Coffee, with a suitable proportion of Chicory, which is generally preferred.*

The great and increasing demand for this Essence warrants the assertion that it is the

## COFFEE FOR THE MILLION.

THOSE WHO PREFER COFFEE WITHOUT CHICORY SHOULD USE

## SYMINGTON'S ESSENCE OF PURE COFFEE

(FINEST QUALITY).

*Prepared from freshly-roasted Coffee Beans, the whole of the fine delicate Aroma being retained by means of a Special Process.*

Their new 1s. bottle makes 30 cups of Coffee equal to that made direct from the finest Beans, while the convenience of preparing just the quantity required, from a cup to a gallon, makes it much more economical.

**GOLD MEDAL** awarded New Zealand Exhibition, 1882; and Calcutta Exhibition, 1884.

### EXTRACT FROM "BRITISH MEDICAL JOURNAL."

"Symington & Co.'s Coffee Essences have a standard reputation, and possess great merit. The Coffee Essence must be prepared in *Vacuo* at a temperature, as the aroma of the Coffee is well preserved; in its essential qualities it does not differ in any way from a cup of Coffee made in the ordinary way. The Coffee and Milk is extremely convenient for travellers, bachelors, &c., or wherever it may be convenient to have at hand a preparation which requires only the addition of boiling water to make a cup of good Milk-Coffee."

Agent for Australia: C. A. Anderson, Clarence Street, Sydney, N.S.W. New Zealand: R. Wilkin & Co., Christchurch; Levin & Co., Wellington; and A. Heather, Auckland. United States: Davis, Sacker & Perkins, Boston. Canada: Thos. Stewart, 24 Scott Street, Toronto.

## THOS. SYMINGTON & CO., CHEMISTS, EDINBURGH

To Export Dealers  
and Shippers.

This unique speciality proves a profitable article of investment, as its sale is **CERTAIN, RAPID, AND CONSTANTLY GROWING.**

All those who buy it proclaim its virtues in their circle, and are its most zealous advertisers.

It is put up with directions for use in English, French, German, Italian, and Spanish.

THE MUCH ESTEEMED ENGLISH REMEDY

EASE THE COMFORT

**MIRACULOUS CURE FOR CORNS**

GOOD TEMPER

HEALTH

Copyright

BRODIE'S CELEBRATED PREPARATION

LAWRENCE & CO., 485, OXFORD ST., LONDON, SOLE PROPRIETORS.

BRODIE'S CELEBRATED PREPARATION

Brodie's Remedy  
for Corns

Is one of the most elegant and attractive articles of the kind and is now to be found on the shelves of all the principal chemists in the United Kingdom.

**SOLE AGENTS**  
The interests of the firms who have obtained these preparations scrupulously protected. The accompanying engraving represents the envelope in which the article is enclosed.

Sold by Chemists, in Packets, 1s. 1½d. each. May be had of all the Wholesale Houses, or direct from

## LAWRENCE & CO., 19 NEW OXFORD STREET, LONDON, SOLE PROPRIETORS.



# SQUIRE'S PATENTED Malted & Cooked FARINACEOUS FOOD FOR INFANTS.

PRIZE MEDAL—INTERNATIONAL HEALTH EXHIBITION.

This will be found one of the most nutritious and easily digested Foods for Infants. It is prepared from the best wheaten flour, treated with malt in solution, whereby the food becomes very largely self-digestive. This process *includes* all the soluble and digestive properties of the malt, and *avoids* the introduction of the husk, which is directed by Professor Liebig to be strained out when foods are made with ground malt.

## SQUIRE'S CHEMICAL FOOD.

It is a complex solution of Iron, Lime, Soda, and Potash, in a Phosphoric Syrup. The Iron is in the Ferrous condition. This Preparation, formerly known as PARRISH'S CHEMICAL FOOD, has been purchased by Messrs. SQUIRE. Each bottle of the genuine Preparation is secured by their seal, and the cases bear their Registered Trade Mark.

## SQUIRE'S SUPER-DIASTASIC MALT EXTRACT.

EXTRACT BYNES (SQUIRE).

This Extract is prepared from the finest Malted Barley, at a very low temperature, *in vacuo*, by a special process, under the immediate supervision of one of the Firm. It possesses the highest digestive power of any Extract of Malt in the Market. A copy of the *comparative* examinations of the various kinds reported in the MEDICAL TIMES, June 21, 1884, pages 847 and 848, will be forwarded to any Physician on application. It contains only the soluble constituents of good Malt.

TWO PRIZE MEDALS—National Health Society's Exhibition, 1883; International Health Exhibition, 1884.

SQUIRE, Chemist on the Establishment in Ordinary to the Queen, 413 OXFORD STREET, LONDON.

## CONDY'S FLUID—IMITATIONS.

### APOLOGY AND INJUNCTION.

In the High Court of Justice (CHANCERY DIVISION).

CONDY & MITCHELL, Limited, *Plaintiffs*,  
67 Turnmill Street, London, E.C.

ROBERT SUMNER & CO., *Defendants*,

WHOLESALE DRUGGISTS, 40a Lord Street, Liverpool.

We, the undersigned Defendants in this case, having, in ignorance of the legal rights of the Plaintiffs, sold disinfecting fluid under the name of "CONDY'S FLUID," such compound **NOT** being of the Plaintiffs' manufacture, hereby express our regret, and have consented to a **PERPETUAL INJUNCTION WITH COSTS** in this action.

Dated 17th day of October, 1884.

(Signed)

R. SUMNER & CO.

(Witness)

J. W. THOMPSON, Solicitor, Liverpool.





**Wholesale and Export Druggists' Sundriesmen, Surgical  
Instrument Makers, Perfumers, &c.**



THE "MATER."—Screw Glass Stopper.

## FEEDING BOTTLES.

OUR NEW LIST FOR 1885  
NOW READY,  
POST FREE ON APPLICATION.

**CURTAIN ROAD, LONDON, E.C.**



"BRISTOL."—Earthenware C.

Subject to Discount as per List.

							White Fittings.	Black Fittings.
							Per doz.	Per doz.
The "MATER."	green glass, bent neck,	wood top corks,	in 1 doz. boxes	..	..	..	3/6	4/-
"	"	"	each in box	..	..	..	4/3	4/9
"	white glass	"	screw glass stopper, in 1 doz. boxes	..	..	..	4/-	4/6
"	"	"	earthenware caps, each in box	..	..	..	7/6	8/-
"	"	"	screw glass stopper, each in box	..	..	..	7/6	8/-
"	"	"	extra tube and teat	..	..	..	10/-	11/-
"	"	"	tin screw caps	..	..	..	8/-	9/-
"	"	"	very superior fittings	..	..	..	10/-	11/-
"	"	"	porcelain caps, gold lines	..	..	..	10/-	11/-
The "IMPERIAL,"	suitable for export,	green glass, straight,	wood top corks, in 1 doz. boxes	..	..	..	3/8	3/9
"	"	"	each in box	..	..	..	4/-	4/9
"	"	"	metal screw caps, in 1 doz. boxes	..	..	..	4/3	4/9
"	"	"	white glass, straight, earthenware caps, each in box	..	..	..	7/-	7/6
"	"	"	pure tin caps, each in box	..	..	..	7/6	8/-
The "BRISTOL,"	green glass, bent neck,	wood top corks,	in 1 doz. boxes	..	..	..	3/-	3/8
"	white	"	earthenware caps, each in box	..	..	..	—	4/8

The last is one of the best lines ever introduced; is put up in handsome box, with neat label.



# CHEVALIER'S PERLES

7 BARTHOLOMEW  
CLOSE,

Trade Mark



Registered.

LONDON,  
E.C.

MESSRS. F. CHEVALIER & CO. having obtained the services of Mr. E. CANT (formerly with Messrs. ALLEN & HANBURY'S) Manager, and having made great improvements in the style of their goods, can confidently recommend them as the most reliable, and at the same time the most saleable Capsules in the market. They are now packed in JAHNCKE'S PATENT METALLIC BOXES, shapes well suited for the pocket. A very special feature is that they are not labelled on the box but on the wrapper, and have a piece of paper of directions inside. Chemists, in dispensing them, can therefore remove the wrapper and directions and put on their own dispensing Label. Customers, when using Sandal Oil, &c., have only to tear off the wrapper and throw away the directions. These Perles are so packed in separate divisions that each one remains in its place to the last, thus avoiding the disagreeable rattling of an ordinary box of hard capsules. The Circulars enclosed in the boxes are divided into two sets. On one appears all remedies such as Castor Oil, Gregory's Powder, &c., and on the other such remedies as Copaiba and Sandal Oil; these are each kept strictly separate with their own class of goods, so that Chemists may be

assured that in selling Castor Oil Perles they are not handing out a circular recommending Balsam of Copaiba.

The manufacturers absolutely guarantee the quantity and quality of all drugs and preparations used in filling their Perles. They are also prepared to fill their Perles with any drug or preparation to order, upon moderate terms, and in plain boxes if desired.

By an agreement made with Messrs. ALLEN & HANBURY'S, CHEVALIER & Co. can supply Chemists with Perles filled with the A. & H. Perfected Cod Liver Oil.

## SCALE OF SIZES OF PERLES.

No. 1 contains	10 minims.	No. 4 contains	40 minims.
No. 2     "	20     "	No. 5     "	60     "
No. 3     "	30     "	No. 6     "	80     "

## Directions for taking Chevalier's Soluble Perles.

The Perles may be readily swallowed by the aid of a little milk or other fluid. Being very flexible the largest may be swallowed without any difficulty.

This Price List is subject to a Discount of 33 $\frac{1}{3}$  per cent. to Chemists, and an additional 5 per cent. for cash in 7 days prompt.

NAME	NUMBER IN EACH BOX	QUANTITY IN EACH PERLE	RETAIL PRICE	COMPOSITION OF CONTENTS
PERIENT.....	12	60 grs.	s. d.	Confection of Senna.
PIOL.....	24	60 grs.	1 9	
SSAFOTIDA.....	12	3 m.	1 6	Apio 3 m. Olive Oil 7 m.
AMPHOR MONOBROMIDE.....	12	5 grs.	1 0	A Strong Tincture with Spirit.
ASTOR OIL.....	12	3 grs.	1 0	Monobromide of Camphor and Sugar of Milk.
" ".....	12	30 m.	1 0	Bleached East Indian Oil.
" ".....	24	30 m.	1 9	" " "
" ".....	12	60 m.	1 6	" " "
OD " LIVER OIL.....	24	60 m.	2 6	" " "
" ".....	12	30 m.	1 0	Pale Norwegian Oil.
" ".....	24	30 m.	1 9	" " "
" ".....	12	60 m.	1 6	" " "
" ".....	24	60 m.	2 6	" " "
ARBOLIC ACID.....	12	1 gr.	1 0	Calvert's No. 1 with Glycerine 9 m.
HARCOAL.....	24	10 grs.	1 6	
REASOTE.....	12	1 gr.	1 0	From Beechwood, with Almond Oil, 9 m.
HLOROFORM.....	12	3 m.	1 0	Duncan & Flockhart's, with Almond Oil.
GREGORY'S POWDER.....	12	60 grs.	1 6	B.P. Strength with heavy Magnesia.
" ".....	24	30 grs.	1 6	
ICORICE POWDER.....	12	60 grs.	1 6	Compound German Licorice Powder.
" ".....	24	30 grs.	1 6	
IALE FERN OIL.....	24	10 m.	2 6	Made by Allen & Hanburys.
" ".....	12	30 m.	3 0	"
ETHER.....	24	20 m.	2 0	Duncan & Flockhart's.
PERMANGANATE OF POTASSIUM ..	24	1 gr.	2 0	With an Inoxidisable and inert base.
ANTONINE CO.....	24	3 grs.	2 0	Santonine with 30 m. Castor Oil, as recommended by Dr. Sidney Ringer.
AR, NORWEGIAN.....	24	30 m.	2 6	Carefully selected.
PURPENTINE.....	24	10 m.	1 6	Rectified Spirit of Turpentine.
" ".....	24	30 m.	2 6	(Howard's Medicinal.)
COPAIBA.....	24	10 m.	1 6	We carefully test every sample of Copaiba bought by us before purchase.
" ".....	24	20 m.	2 6	
" ".....	24	30 m.	3 6	
" ".....	24	10 m.	2 0	
COPAIBA AND CUBEBS.....	24	20 m.	3 0	We use a product of the complete exhaustion of Cubebs in all these Perles.
" ".....	24	30 m.	4 6	
" ".....	24	30 m.	4 6	
" ".....	24	10 m.	2 6	
" ".....	24	20 m.	3 6	Best English distilled Oil.
" ".....	24	30 m.	4 6	
" ".....	12	60 m.	2 6	
" ".....	24	60 m.	4 6	
SANDAL OIL.....	24	10 m.	3 6	
" ".....	24	20 m.	6 0	

To this List will be added such new remedies as may be in demand. We shall be glad to carry out the suggestions of Medical Men.



Messrs. SANGER & SONS beg to inform the Trade that they can now supply FELLOW'S, DUSART'S, or CHURCHILL'S SYRUPS, unstamped, on the following conditions:—

First, that they are *only used in making up prescriptions*; if sold otherwise they must be stamped before sale. Secondly, every order for unstamped Syrups must be written on "to be used for dispensing purposes only."

Prices are as follows:

					Net.
CHURCHILL'S SYRUP	...	4/-	37/-	per doz. subject.	37/6
DUSART'S	...	2 6	26/-	"	22/6
FELLOW'S	...	1-lb.	35/-	"	29/6
Do.	...	1-lb.	56/-	"	47/6

# SANGER & SONS' PRICE CURRENT,

OF  
ENGLISH AND FOREIGN  
PATENT MEDICINES,  
PERFUMERY,  
LOZENGES.



OF  
DRUGGISTS' SUNDRIES,  
MINERAL WATER,  
SPONGES, &c.

FREE ON RECEIPT OF BUSINESS CARD.

## SPONGES OF SUPERIOR QUALITY—SANDLESS.

By the Quarter, Half, or Whole Case. In smaller quantities, Carded or otherwise.

Before BUYING ELSEWHERE, compare our PRICES with those of other WHOLESALE HOUSES.

### CARDED, HONEYCOMB, OR TURKEY SPONGES.

RETAIL.			PER DOZ., SUBJECT.			NETT.			RETAIL.			PER DOZ., SUBJECT.			NETT.
s. d.			£ s. d.			s. d.			s. d.			£ s. d.			s. d.
0 1	...	...	0 0 8	...	...	0 7	...	...	1 0	...	...	0 8 0	...	...	10
0 2	...	...	0 1 4	...	...	1 1 1/2	...	...	1 6	...	...	0 12 0	...	...	1 3
0 4	...	...	0 2 8	...	...	2 3 1/2	...	...	2 0	...	...	0 16 0	...	...	1 8
0 6	...	...	0 4 0	...	...	3 5	...	...	2 6	...	...	1 0 0	...	...	1 1
0 9	...	...	0 6 0	...	...	5 1 1/2	...	...							

Purchasers of Druggists' Sundries, Smelling Bottles, Hair Brushes, Combs, Sponges, Thermometers, Filters, and Boxes of all descriptions should pay a visit to our Showroom before purchasing elsewhere, in order to compare our prices and quality against other cases.

### AGENCIES OF ALL KINDS UNDERTAKEN ON FAVOURABLE TERMS.

J. SANGER & SONS, 489 Oxford Street, LONDON, W.

## KEARSLEY'S WIDOW WELCH'S FEMALE PILLS.

These are universally acknowledged to be the Genuine, and Druggists may safely recommend them.

### CAUTION!

The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incumbent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of F. & T. Street, whose Widow found it necessary to make an Affidavit, for the protection of her property, in the year 1798. The Genuine Recipe for **Widow Welch's Female Pills** has been prepared by them for 98 Years! Chemists are particularly requested to remark that, as a testimony of authenticity, each bill of directions contains an Affidavit, and bears the signature of "C. KEARSLEY," in writing, also engraved on the Government Stamp, at each box is wrapped in WHITE paper.

1,000 Handbills with Name, and 2 Tin Showcards, supplied with all Orders for One Dozen (13) boxes.

PRICE 27s. PER DOZEN, SUBJECT TO USUAL DISCOUNT.

Special Quotations to Shippers and for large quantities, on application to

J. SANGER & SONS, 489 OXFORD STREET, LONDON, W.



# BARCLAY & SONS,

95 FARRINGDON STREET, LONDON.



## PATENT MEDICINES

AND

## PROPRIETARY ARTICLES,

ENGLISH, FRENCH, AND AMERICAN, ETC.

## LEEMING'S ESSENCE,

FOR LAMENESS IN HORSES.



GONE LAME.

### CAUTION.

It having come to the knowledge of **BARCLAY & SONS** that persons, both at home and abroad, have been preparing and offering for sale an imitation of **LEEMING'S ESSENCE**, they beg to caution the trade that all such preparations are spurious, and that no person has any right or authority to prepare **LEEMING'S ESSENCE** except **BARCLAY AND SONS**, who have purchased the original recipe, and whose name appears on the label.



CURED BY LEEMING'S ESSENCE.

This Essence cures Strains of the Back Sinews, also Slips and Strains of the shoulders, Stifle, Hough, Whirlpool, Knee, Fetlock, and Coffin Joints. It makes the quickest and surest cures of any article yet known, and horses may be worked during the time of cure. **PRICE 2/6.**  
**LEEMING'S SHOULDER MIXTURE** cures Horses' Backs and Shoulders when bruised or sore, and horses may be worked during the time of cure. **PRICE 1/.**

## NEW ARTICLES.

### ZYMOLYS

#### INTERNAL DISINFECTANT.

(REGISTERED TRADE MARK.)

THIS PREPARATION is a *sure and harmless* Disinfectant of the Blood and Tissues of the Body, rendering the human frame proof against *Zymotic*, or Infectious, Diseases—Measles, Scarlet Fever, Diphtheria, Sore Throat, Small-pox, Typhoid, Cholera, &c.

Cures for diseases are always ready to hand, but **ZYMOLYS** supplies a long-felt want, and is, what no other medicine can justly claim to be, a *Reliable Preventive of Infectious Diseases*.

By the use of **ZYMOLYS**, which gives immunity from the above diseases, Epidemics can be effectually stamped out, and prevented from spreading beyond the person first attacked.

RETAIL, 2s. 9d., 4s. 6d., 11s., 22s.

### Ball's Bronchial Blessings

OR

#### THROAT LOZENGES.

These Lozenges, which flavour, are invaluable for removing and preventing Hoarseness, of the throat, to which particularly those business demands a

9½d.

are of an agreeable for removing and preventing Irritation or Ticking everyone is liable, whose profession or continual use of the voice.

Adults should take one Lozenge from time to time as occasion may require, allowing it to dissolve slowly in the mouth. Children will find half a Lozenge sufficient.

Ball's Bronchial Blessings can be obtained at any Chemist's.

WHOLESALE AGENTS,

BARCLAY & SONS, 95 FARRINGDON STREET, LONDON.

BARCLAY & SONS, 95 FARRINGDON STREET, LONDON.



**CHEMISTS' LABELS.**

FOR SAMPLES AND OTHER INFORMATION, ADDRESS

**THE BASKERVILLE PRINTING CO., LTD.,****4 HARRINGTON STREET, LIVERPOOL.**OVER 1,000 KINDS OF LABELS IN STOCK.  
COUNTRY ORDERS PROMPTLY EXECUTED.See page 92 (Literary Section) for  
"The Chemist and Druggist" Announcement.TOWNSEND'S 1885 CALENDAR. Every Chemist  
should use it. Sent free for 1d. Stamp.**CHEMISTS****HANDBILLS**Crown 8vo. } 5,000 6/9. 10,000 11/6  
7½ by 4¾.Demy 8vo. } 5,000 11/6. 10,000 18/-  
8½ by 5½.**CHEMISTS' MEMORANDUM FORMS.**Litho, 1,000, 9/6 3,000, 18/- 5,000, 25/-  
Type, 1,000, 6/- 3,000, 15/- 5,000, 20/-**CHEMISTS'****LABELS**

Type Slips, 10,000 in ten kinds for 10/-

**JAMES TOWNSEND, Medical Label Printer, EXETER.****THE LONDON HOMOEOPATHIC HOSPITAL  
AND MEDICAL SCHOOL,**Great Ormond Street, Bloomsbury. Unendowed. Seventy Beds. Fund  
urgently needed. Trained Nurses sent out to attend private patients.

For further information apply to the Hospital. By order,

**G. A. CROSS, Secretary.****HAWLEY'S  
COUNTER ADJUNCTS**A selection of useful and ornamental preparations with  
artistic labels.**"RECENT MATERIA MEDICA."**

By F. HARWOOD LESCHER, F.C.S., &amp;c.

THE First Edition of this Work contains, in a condensed  
form, all known information upon Recent Materia Medica.  
It will prove of great value to the Chemist.

Price, 2s. 6d.; post free, 2s. 8d.

**STEEL AND MEAT.**A sweetened and aromatic wine, holding the above in solution  
A stimulating and nutritive tonic; a powerful and agreeable  
medicine for children, ladies, invalids, and convalescents.In square, thick, blue glass bottles, capsuled, with a  
elaborate label with space for printing name and address of  
chemist, and also one with directions. The bottle holds 11 ounce  
by weight, and is in a strong ornamental cardboard box.Price of the bottle in case, retailing in England about  
4s. 6d.: 1 dozen, 32s.; 6 dozen, 29s. per dozen. In bulk  
3s. 4d. per lb.**EVANS, LESCHER & WEBB,**  
60 Bartholomew Close,  
LONDON.**EVANS, SONS & Co.,**  
56 Hanover Street,  
LIVERPOOL.

PARIS AND MONTREAL.

**J. ROSE, Commercial and General PRINTER,****NORTH CLIFF WORKS, WIRTON-IN-LINDSEY, R.S.O.**  
INVITES ATTENTION TO5,000 Memorandum Forms or Statements, 8x5 in., rom 17s. 6d.; ruling 6d. per 1,000 extra. 5,000 Bill Heads, same size or assorted equal, 17s. 6d.  
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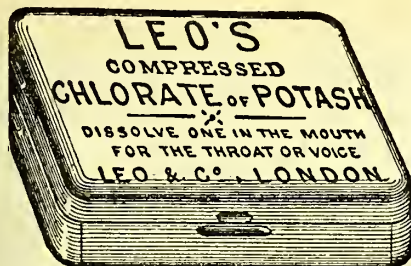
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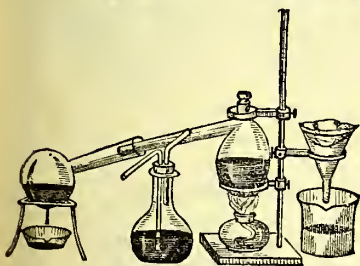
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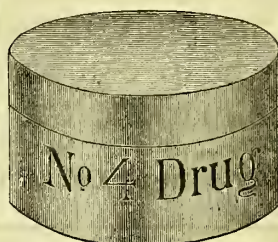


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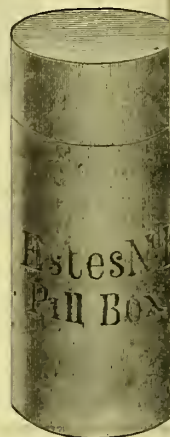
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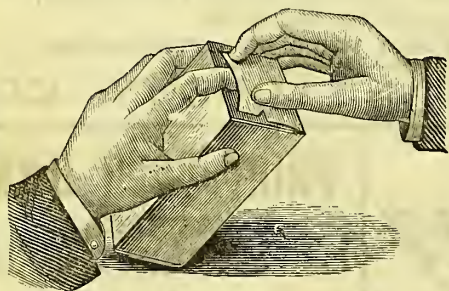
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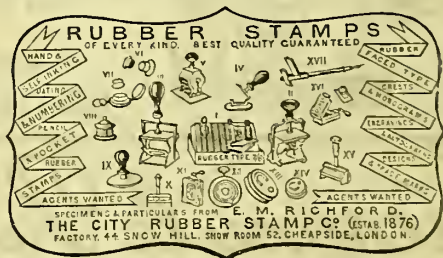
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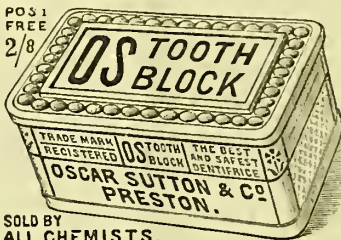
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Eminent English  
Medical Men.

**SKIN SOAP.**

**REDUCTION OF PRICE**  
November, 1884.

**BRECKNELL, TURNER & SONS, Haymarket,**  
**LONDON,**

AND THROUGH ANY WHOLESALE HOUSE

By appointment to the Queen.

**SPECIAL NOTICE.**

The price for stamping Names and Addresses on the tops of

**HUNT'S BOTTLE CAPS**

IS NOW REDUCED TO 4d. PER GROSS.

OF ALL WHOLESALE HOUSES, OR—

**W. F. HUNT & Co., 3 to 5 Little Windmill St., London, W.**  
**MANUFACTORY—MARSEILLES.**

**JAMES'S TOILET SPECIALITIES.**

**JAMES'S HERBAL OINTMENT**, for the Cure of Pimples, Black Specks, Blotches, &c., and taking away Tan Freckles, Sunburn, &c. Sold by all Chemists, 1/1½ and 2/9 per box.

**JAMES'S DEPILATORY,**

For the instant removal of Superfluous Hair. Sold by all Chemists, 1/- and 2/- per box.

**JAMES'S HERBAL POMADE,**

For Promoting the Growth of the Hair, Whiskers, Beard, Moustachios, Eyebrows, and Eyelashes. Sold by all Chemists, 1/- and 2/- per box.

*These Articles are well worthy the attention of Chemists, Wholesale Houses, and others, as they are being well advertised.*

**JAMES & CO., 226 Caledonian Rd., LONDON, N.**

BEAUTY—WOMAN'S GREATEST CHARM.

**NORINA'S EMOLLIENT,**

Prepared from the Recipe of the late Dr. ANDERSON, produces a lovely complexion. It is elegantly perfumed, without sediment, and perfectly harmless. One of the best preparations before the public. Largely advertised and in great request. 4/6 each.

Agents—Messrs. NEWBERRY, King Edward Street, Newgate Street, London.

**ORPE'S COMPOUND PERFUME.**

½-lb. Bottles, 6/6 each; 1-lb. ditto, 12/6 each.

This compound will be found superior to Bergamot or Lemon for scenting Pomades, Cosmetics, or Oils. (¼ oz. to 2 lb. Oil. Olive.)

**A. F. FOSSE** (LATE T. M. ORPE), 329 Old Kent Rd., London, S.E.

Importer of French Pomades and Essences. Obtained through Messrs. Maw, Son & Thompson, and all Wholesale Houses.



COOL TO THE HEAD, EFFECTIVE  
AND INVIGORATING



**SET WITH FINE STEEL WIRES AND ENCLOSED WITH BRISTLES.**

These brushes are delightfully cool to the head, producing a most agreeable sensation, and will penetrate the most luxuriant hair without injury. They have been used by the Japanese for centuries, and were introduced into Europe from Japan burnt on and then polished. These handles are also in solid pieces, and hence will not fall apart as in the case of brush handles covered with veneer. The bristles are made of steel wire, and are *not* made of horsehair or goat hair. It is made of fine hard drawn steel wires, *about the thickness of ordinary bristles.* This penetrates, smooths, and fixes the HAIR. It is, to express the words of one of our customers, "the best thing I ever saw for smoothing down the top of the brytic brush for toilet uses." Send for a SAMPLE BY POST AND TRY IT.

**Prices of Metallic Comb-Brush, post free.**

Ladies' and Gentlemen's Black Japan....	}	.....	1/6,	1/9,	2/0
" " Lionite-figured					
" " Ivory-coated .....			1/9,	2/0,	2/3
Gentlemen's Black Japan, Military Style .....			—	1/6,	2/0
Dog, Cattle, and Horse Brushes .....			2/0,	2/6,	3/0

**New Patent Fine Steel Comb-brush with or without bristles, post free.**

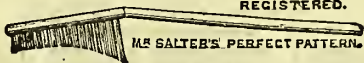
Ladies' and Gentlemen's Black Japan .....	1/9,	2/0,	2/3
Ivory-coated .....	2/0,	2/3,	2/6
Gentlemen's Black Japan, Military Style in fine steel only, without bristles .....	—	2/3	2/6

These brushes are now enclosed with bristles in order to give them a more finished appearance. They can, however, be had without the bristles, but all orders for the former must quote the letter "B" following the number of brush required, as "Fine Steel Black Japanned No. 8 B," or "No. 9 B," etc.

*All Goods are forwarded safely packed in Neat Boxes.*

**ASHWORTH BROS. MOSS BROOK WORKS,  
COLLYHURST, MANCHESTER, ENGLAND.**

**CHEMISTS, &c., SHOULD STOCK and PUSH**  
**REGISTERED.**



The only Tooth Brush to thoroughly Cleanse the Teeth.

LADIES' and GENTS', 90s. per gross; CHILDREN'S, 54s.

Each size packed, assorted cuts and textures, in 1 doz. boxes.  
15 per cent. Discount—Cash with Order.

**G. SALTER**, Corn Exchange Passage, BIRMINGHAM.



FERGUSON'S PATENT TOOTH POWDER OR  
DENTIFRICE SPOON

*For Supplying Tooth Powder or other Dentifrice to the Brush.*

The spoon is fitted inside a suitable bottle, which forms a receptacle for the den-  
frie, the spoon itself acting as an air-tight stopper to the bottle.

8s. per dozen; retail, 1s. each

The bottles are sold empty, consequently they increase the sale of tooth powder from bulk. Wholesale from

J. A. FERGUSON, 53 GT. GEORGE STREET, LEEDS.

And the following London Agents:—Barclay & Sons; Bourne & Taylor; Edward & Sons; Hovenden & Sons; Lynch & Co.; Maw, Son & Thompson; Newbery Son; Thompson, Millard & Co.; and all the principal Provincial Houses.

# Robare's Aureoline

OR  
GOLDEN HAIR WASH.

The attention of the Trade is respectfully called to the above Article, now having a large sale, and giving an excellent profit to the Retailer.

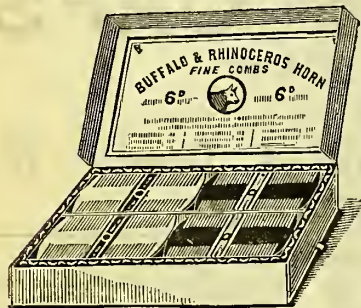
5/8 size, 36/ per doz. 10/8 size, 72/ per doz

SOLE WHOLESALE AGENTS—

**R. HOVENDEN & SONS, LONDON**

**TRADE MARKS—BULL AND BULL'S HEAD.**

**S. R. STEWART & CO.,**  
ABERDEEN COMB WORKS, ABERDEEN.



AWARDED THE ONLY FIRST PRIZE MEDALS at London, 1862; Vienna, 1873; Paris, 1878; Sydney, 1879; Melbourne, 1880; Adelaide, 1881; Amsterdam, 1883; Calcutta, 1884, for

**C O M B S .**

**Real and Imitation Tortoiseshell, Buffalo, Rhinoceros, and pure White Horn.**

**DRUGGISTS' SCOOPS & SPOONS, FRUIT KNIVES, PAPER-CUTTERS,**

AND ALL OTHER HORN GOODS. THE TRADE ONLY SUPPLIED.

BRANCHES—126 Queen Victoria Street, LONDON, E.C., & 14 Carr's Lane, BIRMINGHAM.



**COATE & CO.,**THE LONDON BRUSH WORKS,  
AXMINSTER, ENGLAND,

**I**N publishing their present Price Current, tender their best thanks for the favours received for a period of thirty-seven years,

During which time, by the patterns registered and processes patented, namely, the White Enamelled Cement, the Machinery applied, the New Machines invented, &c., they believe they have taken the lead in improving the Manufacture of Tooth Brushes more than all the other Tooth Brush makers in the world put together, whose main efforts seem to have been that of trying to imitate the style and patterns of COATE & Co., but with very imperfect success as yet.

For, as a true test of the superiority of their manufacture, COATE & Co. can say that at the present moment their customers are now supplying most of the crowned heads, princes, and nobles of Europe with Tooth Brushes made by COATE & Co.

Such being our present position in this branch of manufacture, we beg to assure our friends and customers that no efforts will be spared to hold our position and merit their continued support and approval.

We trust and think that the life-size Illustrations now issued will greatly assist our customers at the retail counter, and facilitate orders per letter at home and abroad.

The drawings of each pattern signify actual size and shape, not hardness, except the patterns G H (Goat Hair), V S (Very Soft), V H (Very Hard), Y, for Yellow or Unbleached Hair, and B H (Badger Hair). All the other patterns are made and sent out in Soft, Medium, and Hard, assorted, unless ordered to the contrary.

If best Tooth Brushes are ordered by the gross assorted, with a remark as to hardness, preferable or objectionable patterns, a better and more saleable variety can be had than if ordered by one or two dozen per No. Observe, no Sponge Brushes, Palate Brushes, Very Soft or Very Hard, would be sent unless specially ordered to be sent in such gross, and customers who order Assorted Patterns can rely on having a nice assortment sent at once; but, when ordered to pattern, more time may be required, for although COATE & Co. held in stock on January 1, 1885, nearly three thousand gross of Tooth, Hair, and Nail Brushes, made and partly made, yet the variety of Patterns, Qualities, and Hardness is so great that they cannot at all times keep up a large quantity of each Sort, Pattern, or Hardness.

THE FOLLOWING ARE A FEW OF THE PRICES OF OUR MERCHANTABLE TOOTH BRUSHES:—

	Per doz.		Per doz.
Common Cemented .. .. .	2/	Cemented, Superfine, stamped with Elephant ..	5/
Cemented .. .. .	2/6	Warranted Best, stamped with Royal Arms ..	5/6
" London .. .. .	3/	Warranted Best Hair, stamped with Trade Mark..	6/
" Improved .. .. .	3/6	Extr Best, stamped with Trade Mark and "Coate	
" Warranted .. .. .	4/	& Co.," London .. .. .	6/6
" Warranted Extra .. .. .	4/6		

**Late of 41 LISLE STREET, LONDON.**

ILLUSTRATED PRICE LIST SENT FREE ON APPLICATION WITH BUSINESS CARD

N.B.—A Large Stock of Finished TOOTH BRUSHES, &c., kept ready for Merchants' Shipping Orders.



# THE CROWN PERFUMERY CO.,

TRADE MARK. 177 New Bond St., London,

Beg to draw the attention of Chemists, Druggists, and Perfumery Dealers to their Fine Perfumes and Fancy Soaps, for the excellent quality of which

**SEVEN PRIZE MEDALS HAVE BEEN AWARDED.**

*Concentrated Essences of Great Fragrance and Strength:—*

Tanglewood,  
Crown Bouquet,  
Mathiola,  
Stephanotis,

White Rose,  
Jockey Club,  
Ess Bouquet,  
Wood Violet,

Frangipani,  
Opoanax,  
Ylang Ylang,  
Isle of Wight Bouquet.

16, 20, 28, 48, and 84/ per doz.

SUPPLIED IN BOND FOR EXPORT AT GREATLY REDUCED PRICES.

**THE CROWN SOAPS** are prepared with great care from the purest materials, delicately perfumed, and very lasting.

**BROWN WINDSOR, HONEY, ALMOND AND GLYCERINE, ROSE, &c.**—In Card Boxes of 3 tablets each, 8/ and 12/ per dozen boxes; also in Wood Boxes of 7 or 14 lbs., 64/, 74/, 84/, and 120/ per cwt.

**PURE COAL TAR SOAP.**—Each tablet enveloped in tin-foil. 27s. per gross. The well-known disinfecting properties of this Soap have caused it to be in universal demand. Its regular use, especially in warm climates, quickly allays all irritation of the Skin, whilst its agreeable odour induces a feeling of freshness and comfort not attainable by any other means.

**OPALINE SOAP, FOR THE SKIN AND COMPLEXION.**—Absolutely pure, delicately scented, and very emollient. 4/ per dozen tablets.

**OPALINE TOOTH PASTE,** the New Fragrant Dentifrice, 8/ per doz.

**OPALINE FACE POWDER,** 3/6 and 7/ per dozen packets; 15/ per dozen boxes.

*Indents may be forwarded through any English Commission Merchant or Drug House.*

ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE MANUFACTORY,

**NEW FAIRFIELD WORKS, OLD BAILEY, E.C.**

## RIMMEL'S NEW SANITARY PERFUMERY.

SILVER MEDAL,  
National  
Health Society, 1883.



SILVER MEDAL,  
International Health  
Exhibition, 1884.

**RIMMEL'S AROMATIC OZONIZER, OR NATURAL AIR PURIFIER.**

A fragrant powder which, simply spread on a plate in apartments or places of public resort, evolves the refreshing and healthy emanations of the Pine and Eucalyptus, and produces a quantity of OZONE, the great air purifier. It is particularly suitable for the Bedroom and Nursery, and is also in use in the principal Hotels, Clubs, and Theatres, and in the Saloons and Cabins of several Lines of Steamships. The only pleasant and non-irritant disinfectant.

In 4-oz. Tins, 1s.; by post for 15 stamps; 1-lb. tins, 3s. 6d.: Spreading Plate, 6d.

**RIMMEL'S OZONIZED EAU DE COLOGNE, LAVENDER WATER, OR FLORIDA WATER,**

Sprinkled on a pad hung up in the air, destroys bad smells and noxious effluvia in sick rooms, closets, &c. It is recommended also to be used on the handkerchief when attending crowded places, visiting the sick, or travelling by land or sea.

Price 2s. 6d. and 5s. per bottle; Pad, 1s.

**RIMMEL'S AROMATIC OZONIZED CASSOLETTE.**

To carry in the pocket, and preserve from infection. Price 6d.; by post for 7 stamps.

The usual allowance to the Trade. 500 Bills with Name and Address presented to every purchaser to the amount of £2.

**EUGENE RIMMEL, Perfumer to H.R.H. the Princess of Wales,**  
96 STRAND, LONDON, W.C.

## GREENSILL'S FAR-FAMED MONA BOUQUET

THE ORIGINAL AND ONLY GENUINE.

*The great popularity of this exquisite Perfume is a proof of its excellence and superior qualities.*

**T. S. GREENSILL, Chemist, Douglas, Isle of Man,**  
Inventor, Proprietor, and Maker.

AGENTS—LONDON: Sanger; Maw; Edwards; Newbery; Mather; Barclay; Whittaker & Grossmith; Hovenden; Parton & Osborne; Butler & Crispe; Tidman & Son; Barron & Squire; Wright, Layman & Umney; Jno. Thompson; Burgoyne, Burdidge & Co.; Grimwade, Ridley & Co.; Balss Brothers; Lynch & Co. LIVERPOOL: Evans, Sons & Co.; Clay, Dod & Case; B. Sumner & Co.; Raimes & Co.; Ayrton & Sanderson. MANCHESTER: J. Woolley; Lynoh & Bateman; Jewsbury & Brown; Mather. EDINBURGH: Duncanson & Lockhart. DUBLIN: M'Master; Hodgson. YORK: Sutcliffe & Headley Clark, Bleasdale. THIRSK: Wm. Foggett. BRISTOL: Ferris & Co. LEEDS: Goodall & Backhouse. BIRMINGHAM: Churchill & Son; P. Harris & Co.; Parton & Osborne; Southall Bros. & Barclay.

Agents for CALCUTTA: Smith, Stanistreet & Co. MONTREAL: Sugden, Evans & Co. NEW ZEALAND: Kempthorne, Prosser & Co. MELBOURNE: Felton, Grimwade & Co. Introduced in 1852.

Refuge for Douglas Bay

## OKELL'S ORIGINAL MONA BOUQUET

Retail, 1/, 1/6, and 3/6. Wholesale, 9/, 15/, and 30/ per doz.

This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for WHOLESALE Agencies to be made to the Sole Consignee, **THOMAS WEST, Chemist, 61 Chester Road, Stretford, Lancashire.**

**INDEX TO ADVERTISEMENTS,**  
SEE PAGES 39, 40.



# Notice to the Trade

## GENUINE EAU DE COLOGNE

MANUFACTURED BY

JOHANN MARIA FARINA,  
JULICH'S PLATZ No. 4,

A DESCENDANT FROM THE

*Original Manufacturer of this Valuable Perfume,*  
IS KNOWN THROUGHOUT THE WORLD AS

### No. 4.

AND SOLD BY ALL THE LEADING WHOLESALE HOUSES.

In 2 oz. Bottles.

In 4 oz. Bottles.

In 6 oz. Bottles.

In 8 oz. Bottles.

In reputed  $\frac{1}{2}$ -Pint, Wickered.

In reputed Pint, Wickered.

In reputed Quart, Wickered.

In 4 oz. Bottles, Wickered.

JOHANN MARIA FARINA,  
JULICH'S PLATZ No. 4,  
COLOGNE-ON-THE-RHINE.

By Special Appointment to the Prince of Wales and to several Imperial and Royal Courts.

Possessor of PRIZE MEDALS and DIPLOMAS of the Exhibitions at LONDON, 1851; NEW YORK, 1853;  
LONDON, 1862; OPORTO, 1865; CORDOVA (Argentine Republic), 1871; and at VIENNA, 1873; SANTIAGO (Chili), 1875;  
PHILADELPHIA, 1876; CAPE TOWN (South Africa), 1877 (Gold Medal); SYDNEY, 1879; and MELBOURNE, 1880.

Sole WHOLESALE Agents for the United Kingdom and Colonies,

FICKUS, COURTENAY & CO.

ST. DUNSTAN'S BUILDINGS, GREAT TOWER STREET, LONDON.



ESTABLISHED 1810.

# H. BROOKS, PEEL & CO., COLLAPSIBLE TUBE MANUFACTURERS

PATENTEES AND SOLE MANUFACTURERS OF THE

## PORTABLE METAL SPRINKLER STOPPER,

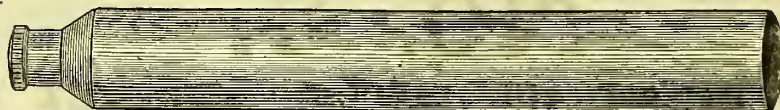
AND DEALERS IN

GLASS BOTTLES FOR PERFUMERS AND OTHERS

STEAM FACTORIES:

31 Lime St., Camden Rd. (Offices), and Bartholomew Rd., Kentish Town, London, N.W.

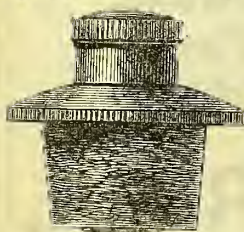
## COLLAPSIBLE TUBES OF ALL SIZES



For Perfumes, Artists' Colours, Soaps, Cosmetiques, Creams, Oils, Varnishes, &c. These Tubes are inexpensive and portable, and may be applied to many useful purposes besides those above mentioned.

SOLE MANUFACTURERS AND PATENTEES OF

## THE PORTABLE METAL SPRINKLER STOPPER,



With Cork fitted thereon for bottles of any size, and having apertures of various dimensions, especially adapted for Perfumes, Hair Washes, Lime and Glycerine Essences, &c. These handsome stoppers give a character and finish to the most ordinary bottles to which they may be applied. Gilt or plain; and put up if required in handsome glass lid boxes, suitable for shop counters and show cases, at moderate prices.



No. 18a.

## THE "TORSION" PATENT SPRINKLER.

The two designs, Nos. 18A and 19A, are those to which we direct special attention, as sizes being in general use; other sizes will follow promptly to meet all requirements, on which Caps with two or more holes will be introduced to meet the public taste. Particular attention is called to the latest improvement in our Patent Metallic Stopper, the "Torsion."

This New Stopper adheres to the design of the original patent, which has been universally acknowledged as an ornamental and inexpensive article for the Toilette, as possessing all the advantages of a "Permanent and Indestructible Stopper, suitable for Bottles of all Sizes and Shapes," with the additional security it affords, that the Cap can never be entirely unscrewed, consequently it cannot be lost. It is specially effective as a Sprinkler, while giving a more prompt and copious, yet economic, supply, through the improved action of the Cap. Such combined advantages, in an article of exquisite finish, have long been desired, and it is thus submitted for general approval, and its usefulness when tried will be appreciated by all.

Illustrations, Price Lists, &c., can be had on application, or through any Wholesale House in town or country. All Orders received direct will be promptly attended to.



No. 19a.

**CAUTION.**—All Stoppers of our Manufacture are made of Pure Tin, and have the name of H. BROOKS & CO. stamped on the under side of the rim.

All Tubes are made of Pure Tin unless specially ordered of Mixed Metal, from the smallest size up to 13 in. by 23.

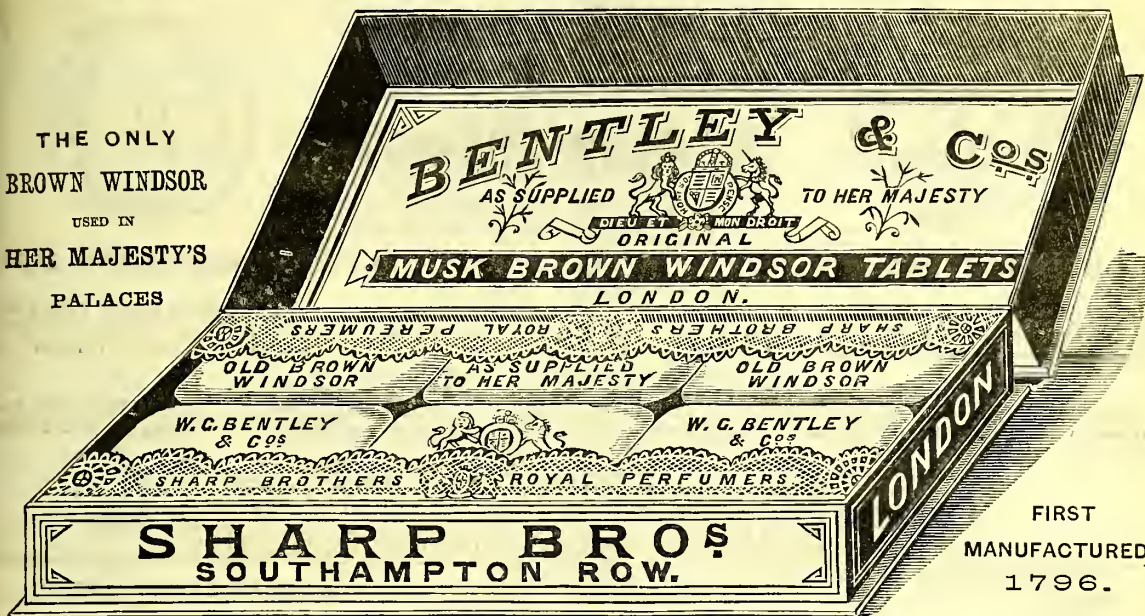


# SPECIAL NOTICE

TO SHIPPERS, WHOLESALE DEALERS, AND THE TRADE.

SPECIALITIES WORTH ATTENTION.

THE ONLY  
BROWN WINDSOR  
USED IN  
HER MAJESTY'S  
PALACES



FIRST  
MANUFACTURED  
1796.

SOLD IN BOXES CONTAINING SIX SMALL TABLETS OR  
THREE LARGE, 1/6 each; 12s. per Dozen Boxes.

## DUCHESS MARIE BOUQUET

ADELINA PATTI'S FAVORITE PERFUME.

2s. 6d., 3s. 6d., 5s. and 10s. 6d. per Bottle; 20s., 28s., 40s., 80s. per Dozen.

London  
56 Chiswick Road, Richmond, Road 38  
To His Highness the Prince of Wales  
July 4, 1882  
Sharp Brothers  
I have much pleasure in certifying  
that "Bentley's famed musk  
Old Brown Windsor Soap" supplied  
solely by me to Buckingham Palace  
was the one selected for the use of  
Her Majesty and the Royal Family.  
Its fragrant and delicate perfume  
combined with its palatable  
condiment qualities have ensured  
the approbation and constant use  
of Her Majesty and her Court.  
John Reddard,  
Master of the Household  
Chemist to the Queen

My dear Lady  
King's Road  
Fulham, S.W. June 15th 1882  
Gentlemen,  
I beg to thank you for the sample  
bottle of "Duchess Marie". I shall feel much  
obliged if you will send me a case of  
a dozen bottles, as I like it very much.  
Yours faithfully,  
Adelina Patti  
Messrs Sharp Bros.,  
12, Southampton Row,  
High Holborn, London



PRICE LIST ON APPLICATION.

SHARP BROS., 12 SOUTHAMPTON ROW, LONDON, W.C.



BY APPOINTMENT TO THE ROYAL DOCKYARDS. GOVERNMENT AND RAILWAY CONTRACTORS.

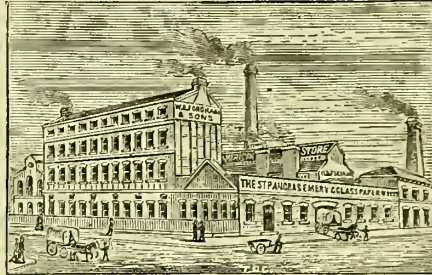
# W. B. FORDHAM & SONS,

## ST. PANCRAS EMERY & GLASS PAPER WORKS,

### 36—40 YORK ROAD, KING'S CROSS, LONDON, E.C.

ESTABLISHED 1825.

TELEPHONE 7514.



#### FIRST-CLASS CERTIFICATE & SILVER MEDAL, CALCUTTA EXHIBITION, 1884

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth, Knife Boards, Knife Powder, Wood Taps with square Corks, Furniture Polish, Plate Powder, Crocus, Tripoli, Rouge, Silver Soap, Brunswick and Berlin Black, Sieves, the St. Pancras Self-acting Washing Machine, Zinc Jars (superior) Polished and Japanned, extra strong Zinc Syringes, "Fly Cheat" Meat Cages, New Sash Tool Racks, "Paragon" Plate Racks, the "Safeguard" Steps, &c.

#### IMPORTERS OF AND DEALERS IN

Glues, Black Leads, Pumice, Rotten Stone, Lamp Cottons, English, American, and German Woodware, Fano Baskets, Wire Nails, Car Brooms, Chamois Leathers, Gloves, House Flannel, Bellows, Feather Dusters, Mouse Traps, Sponge, Tandlesticks, Safety and Paraffin Matches, Vestas, &c.

Sole Agents for London and Suburbs for JAMES' DOME BLACK LEAD.

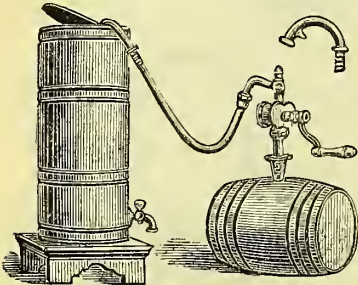
Sole Agents for the United Kingdom for GARD &amp; CO'S POLISHING CLOTHS.

Sole Agents for London and Suburbs for CANNON'S SIZE AND GLUE POWDER.

Sole Agents for London and Suburbs for HAND-MADE SCOURING CLOTHS (REGISTERED).

Sole Agents for London and Suburbs for EASTMAN'S KITCHEN CRYSTAL SOAP.

#### HAND ROTARY PUMP.



#### TESTIMONIAL.

Spring Place, Kentish Town,  
October 20, 1883.Messrs. W. B. FORDHAM & SONS,  
York Road, N.

DEAR SIR, We have pleasure in stating that we have used your Hand Rotary Barrel Oil Pumps in several of our establishments for some time. They have given, and continue to give, the greatest satisfaction. We strongly recommend their use to all dealers in Mineral Oils, &c.

We are, yours faithfully, (Signed)  
WALTON, HASSALL & PORT.

- |                                    |              |
|------------------------------------|--------------|
| 1. Discharges 10 galls. per minute | .. 60/ each. |
| 2. " " 13 " "                      | .. 75/ each. |
| Hose extra.                        |              |

We guarantee this Pump to empty a barrel of oil in 4 ms. Full particulars upon application.

#### KITCHEN CRYSTAL SOAP.



In Cases of 100 Bars, 21/9 per case, net

#### NEW TOILET FIXTURE.



EXTRA SUPER  
Brass-faced  
FIXTURE  
AND  
1,000 Sheets  
PATENT  
PERFORATED PAPER,  
COMPLETE,  
13/6 per dozen.

Rolls of Paper, containing  
1,000 Sheets, 9/ per doz.  
Rolls of Paper, containing  
500 Sheets, 4/9 per doz.

#### THE "SAFEGUARD" STEPS. (Patented.)

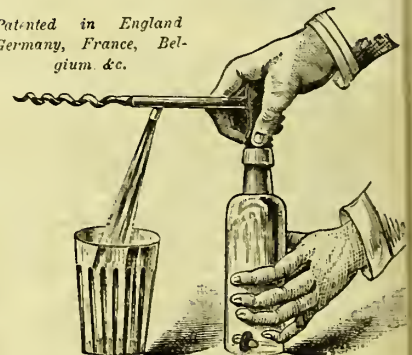


Made of Clear Spruce. Will support a great weight. Takes up no more room than ordinary steps, either when folded or open.

6/-	7/-	8/-	9/-	10/-
each				

#### BOTTLE OPENER AND CORKSCREW. "THE WAITER'S FRIEND."

Patented in England  
Germany, France, Bel-  
gium &c.



Lignum Vitae Handle, Nickel-plated	per dozen
Shank and Screw	12/- net
Ebony Handle, ditto, ditto	13/- net

The NEW "HERCULES" WAREHOUSE TRUCK, in 3 Sizes; full illustrated particulars upon application.  
A New List of Novelties (Illustrated) on March 1, free by post upon application.



**GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.****JOHN OAKEY & SONS,**

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth; Emery, Black Lead, Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &c.

**OAKEY'S WELLINGTON KNIFE POLISH,**

Prepared expressly for Oakey's Patent India-Rubber Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Packets, 8d. each; and Tins, with perforated Tops to prevent waste, 6d., 1s., 2s. 6d., and 4s. each.

**OAKEY'S NON-MERCURIAL SILVERSMITH'S SOAP,**

For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

**OAKEY'S POLISHING PASTE,**

For Cleaning Brass, Copper, Tin, Pewter, &c., &c. Tins, 1d., 2d.; Pots, 6d. and 1s. each.

**WELLINGTON BLOCK BLACK LEAD,**

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

**WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.E.**

Highest Award and Prize Medal, Philadelphia Exhibition, 1876; and Boston, 1883. Gold Medal, Crystal Palace, 1884.

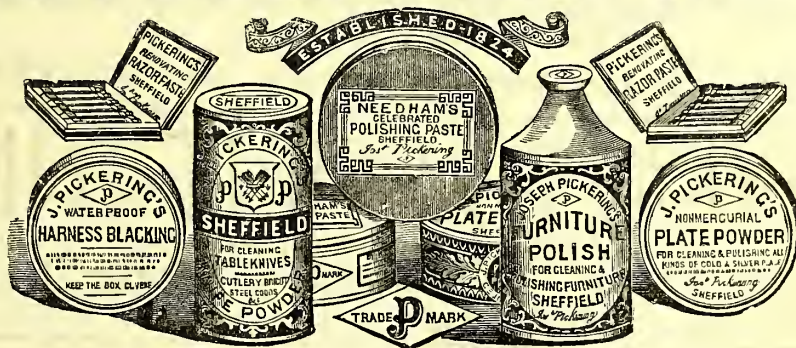
**"BRILLANTINE"****METALLIC  
POLISH POWDER.**

The only one in the World. Has gained many Awards of Merit. To Clean and Polish Gold, Silver, and other Metals Ivory, &c. Put up in Boxes and Packets; also loose in Barrels.

**UNIVERSAL METAL POLISH POMADE.**

NOT TO BE EQUALLED. In Decorated Tin Boxes; also loose in Barrels. SAMPLES ON APPLICATION.

**FRITZ SCHULZ, Jun., Chemical Manufacturer, LEIPSIC.**

**ESTABLISHED 1824.****NEEDHAM'S**

Gold Medal, Adelaide, 1881.  
Order of Merit, Melbourne, 1880.  
Diploma of Merit, Vienna, 1873.

Established over Half a Century.

For Cleaning and  
Polishing Brass, Copper,  
Tin, Britannia Metal,  
&c., &c.

**POLISHING**

Pickering's Furniture Polish, Plate Powder, Knife Powder,  
Brunswick Black, Razor Paste, Harness Blacking, &c.

**PASTE.**

Wholesale by London, Sheffield, Birmingham, and Wolverhampton Merchants,  
and Retail by Chemists, Ironmongers, and Grocers.

**JOSEPH PICKERING & SONS, SHEFFIELD.**



Avoid Imitations under Various Names—Use only the Standard and Original Article.

# HAUTHAWAY'S PEERLESS GLOSS

A NECESSITY in every Family. It BLACKS and POLISHES Ladies' and Children's Boots without Brushing, being supplied with a Sponge attached to the Cork for instant use.

**JOHN S. DEED & SONS. NEW OXFORD STREET, LONDON,**  
SOLE WHOLESALE AGENTS FOR THE UNITED KINGDOM.

# ACETIC ACID

**SCOTT & CO.,** ESTABLISHED 1863.  
Stratford, London, E.

ALSO  
Flowers of Sulphur (Sulph. Sub.) } "Crown  
Virgin Roll and Rock Sulphur } Brand.  
Sulphurous Acid and other Mineral Acids, &c.

✱  
BURROUGHS  
SPIRITUS RECTIFICATUS P.B.

# SPIRITS OF WINE

THE BEST ENGLISH GRAIN SPIRIT  
FREE FROM FUSEL OIL CHEMICALLY PURE  
5 gallons 60 over proof at 19/10 net cash  
Special Quotation for Quantity  
DUTY FREE FOR EXPORT 4/4

Best BURROUGHS  
Methylated  
Spirits  
Cale St Distillery  
CHELSEA,  
S.W.  
AT LOWEST PRICES  
BURROUGHS  
✱

# JONES & MASON, METHYLATED SPIRIT MAKERS.

Regent Wharf, Copperfield Road, Mile End, London, E.  
FROM RATCLIFF.

SAMPLES AND PRICES UPON APPLICATION.

# METHYLATED SPIRIT & FINISH

Supplied of the best quality in wholesale quantities by

**J. & W. HARVEY & CO., Distillers, Yoker, GLASGOW**  
LONDON AGENTS—JAMES CHAMBERS & CO., 23 BIRCHIN LANE, CORNHILL, E.C.

# GENUINE OIL OF MUSTARD SEED

Is strongly recommended as a safe and effectual remedy in cases of Rheumatism, Gout, Rheumatic Gout, Sciatica, Lumbago, Headache, Pains in the Stomach, Spasms, Bruises, Chilblains, &c. *Retail in Bottles, 1s. each.*

Imported by **J. H. & S. JOHNSON, Wholesale Druggists,**  
6, 8, & 10 WHITECHAPEL, AND 7 CHURCH STREET, LIVERPOOL.

# DUBBIN DALES' GOLD MEDAL DUBBIN, PORPOISE OIL

A SUPERIOR PREPARATION  
For Waterproofing, Softening, and Preserving Boots, Harness, Leggings, Machine Belting, Fire Hose, &c. Awarded 3 First Prize Medals, 2 Gold.  
Does not prevent the boots blacking. Free from unpleasant odour. Restores the nature and softness to leather which it loses in wear. Put up in elegant style, and always gives satisfaction. Tins, 1d., 2d., 6d., 1s., and 2s. 6d. Special tins for export. Show-cards, transparencies &c., supplied. Handsome Show Cases for first orders of 30s. For further particulars see page 64, in 1885 Diary. Wholesale from Wholesale Houses, and  
**JOHN T. DALES, 287 CRYSTAL PALACE ROAD, LONDON, S.E.**



**PURE SPIRITS of WINE**

For Tinctures, Essences, Perfumes, &amp;c.

**A. MACNAIR & CO.,**

RECTIFIERS,

20 DUTTON STREET, MANCHESTER,

Beg to call the attention of CHEMISTS AND DRUGGISTS to their under-mentioned prices of Pure Spirits of Wine:—

Strength per cent.	Specific gravity.	Price per gall.
63 over proof ..	0.8238 ..	20/10
60 " " ..	0.8298 ..	20/4
55 " " ..	0.8366 ..	19/10
50 " " ..	0.8482 ..	19/4

Cash on Delivery. Jars to be returned or paid for.

For Exportation, Cask included, 4, 60 o.p., F.O.B.

Orders from the country must be accompanied by a remittance, including the price of the Jars, which are charged as follows:—2 galls. 2/6; 4 galls. 4/0; 5 galls. 5/0; 6 galls. 6/0. When the Empties are returned, the money will be repaid.

Also **ABSOLUTE ALCOHOL.** Prices on application.**PRONK, DAVIS & CO.,**

ANILINE DYE AND CHEMICAL AGENTS,

41 GREAT TOWER STREET BUILDINGS,

LONDON, E.C

Specialities for Varnishes and Wood Stains.

THE FINEST AND CHEAPEST

**SPIRIT BLACK**

IN THE MARKET.

BRONZE POWDER, GOLD AND METAL LEAF.

Vermillion, Vermillionette, Ultramarine.

CUDBEAR, INDIGO PASTE, JEWELLERS' ROUGE.

**Electric Polish! Electric Polish!!**

For cleaning Silver, Copper, Brass, Steel, &amp; all bright metals, diminished labour, less trouble and expense, use

**LEWIS'S ELECTRIC POLISH,**

which will make old and tarnished articles bright as new. It is a liquid preparation, and entirely different to anything yet introduced. It contains no acid, mercury, or injurious chemicals, easily applied, and at once produces a bright, mirror-like surface, and lasting. Tradesmen and others who require a polish for their Scales, Weights, Brass Stalls, &c., it is invaluable. For domestic use, Silver, Electro Plate, Steel, Door Handles, &c., it will prove a great boon. When once tried, it will never give place to any other. An outlay of 6d. for a bottle will never be regretted. Price 6d. and 1s. per bottle, of all Chemists.

SOLE MANUFACTURER,

**D. J. LEWIS, Chemist, &c., High St., Acton, W.**

Wholesale London Agents—SANGER &amp; SONS; G. B. KENT &amp; SONS; S. MAW, SON &amp; THOMPSON; and SOUTHALLS, Birmingham.

The Proprietor can with every confidence recommend this to the Trade.

3 Prince of Wales Crescent, Kentish Town,

London, N.W., January 16, 1884.

SIR,—I have much pleasure in informing you that the bottle of "ELECTRIC POLISH" I thought of you does even more than you promised it should do. I gave it a fair trial with gold, silver, and brass, and found it to give a far more lustrous and lasting polish than any paste or powder I ever tried, and when once a bright surface is obtained it is some considerable time before it becomes dull again. It needs only to be known to be appreciated. You are at liberty to make what use you like of this letter, and I trust the sale of your Polish will continue to increase, as such a very useful and economical preparation deserves to.

I am, Sir, yours truly,

M. HERSANT.

To Mr. LEWIS, Chemist, &amp;c.

Apsley Terrace, Acton, W., April 10, 1884.

Mrs. CONRAD HOWELL has much pleasure in testifying to the excellence of the ELECTRIC POLISH prepared by Mr. LEWIS. It seems to suit all metals equally; it has completely restored some tarnished silver which Mrs. H. was about to send to a Silversmith to be cleaned. No one who tries it can doubt the result.

**S.V.R.**

Guaranteed pure, thoroughly rectified, and made from English Grain Spirits.

60 op., 20s. 9d. per Gal.

56 op., 20s. 3d. " "

**TINCTURE SPIRIT.**

Useful for all purposes where absolute purity is not necessary.

60 op., 20s. 6d. per Gal.

56 op., 20s. " "

1s. per gallon discount for Cash with order.  
Further allowance for quantity.**STEAM STILLS ONLY.****GEORGE PHILLIPS & CO.,**  
DISTILLERS,

Clerkenwell Road, LONDON, E.C.



# "LA BRILLANTINE"

(REGISTERED).

SOLD IN 6d. AND 1s. BOXES.

## T CELEBRATED DANGERFIELD'S IGNITING MATCH CASE



**PRONOUNCED PERFECTION.**  
It has no equal in Mechanical Construction, Workmanship, Quality of Material, Neatness, Compactness, Convenience, and Low Price. Secured by United States and Foreign Patents. Prices the world over:—XX Tin, with Oride Slide, 1/ each, per doz. 7/4; Solid Nickel Silver, 1s each, per doz. 11/6; Solid Nickel Silver, with Cigar Clipper, 2/ each, per doz. 14/7. Sent post free to any part of the world on receipt of price (P. O. O.).

FRANCIS S. DANGERFIELD,  
Proprietor and Sole Manufacturer, ALBURN, N.Y., U.S.A.

C. BRANDON & CO., 16 Red Lion Square, London, Sole Agents for Great Britain and Ireland.

Starching made easy and pleasant.

Prevents the iron sticking to the linen.



Suitable for hot or cold water starch.

Sold in 1d., 3d., 6d., and 1s. Packets, and in Large Boxes, for Hotels, Laundries, &c., 5s., 10s., and 20s. each.

Wholesale by Maw & Sons, Evans, Sons & Co., Southall Bros. & Barclay, Wyleys & Co., &c.

## EXTERMINATION OF ALL

# CORNS & BUNIONS

Guaranteed by using Gardner's patented Corn and Bunion Extremator. Painless in operation, "never fails," is not a drug, but an ingenious little instrument which can be used by anyone. Protected in England and Abroad. Price 1/- each of all Chemists, Ironmongers, &c. The highest Surgical Testimonials can be seen and operations successfully performed at the Patentees, who will also send the Extremator direct for 13 pence.

C. & J. P. GARDNER, Chiropodists, Kendal.

## GUEST'S HOUSEHOLD REQUISITS.

**GUEST'S FURNITURE POLISH REVIVER.** An entirely new preparation, brilliant polish, little labour, and no finger-arks. In patent air-tight tins.

**GUEST'S FURNITURE CREAM** gives a brilliant polish with half the usual labour.

**GUEST'S SILVERSMITHS' PLATE POWDER**—A new preparation, warranted to prevent tarnishing three times longer than any other.

**GUEST'S CUTLERY POLISH** gives a brilliant mirror-like lustre. Sold in perforated canisters.

**GUEST'S BRASS POLISH.**—Splendid polish, rich colour with little labour.

**GUEST'S BRUNSWICK BLACK.**

W. G. & S. have every confidence in recommending above to the public, and earnestly solicit a trial. Samples and price lists on application.

**WM. GUEST & SON,**  
NEPTUNE WORKS, PORTMAHON, SHEFFIELD.



# BROWN'S SATIN POLISH.

Highest Award, Philadelphia, 1876. Gold Medal, Berlin, 1877. Highest Award and only Medal, Paris Exhibition, 1878. Highest Award, Melbourne, 1881. Highest Award and only Medal, Frankfurt, 1881. Highest Award and only Medal, Amsterdam, 1883.

Put on by Sponge attached to Wire and Cork in each Bottle. No Polishing Brush required. Dries in a few minutes. Can be used by any lady without soiling her fingers.

The "Satin Polish" is the most Elegant Article of the kind ever produced.

LADIES' SHOES, which have become Red and Rough by wearing, are restored to their ORIGINAL COLOUR AND LUSTRE, and will not soil the skirts when wet. TARNISHED PATENT LEATHER is improved by it.

For Travelling Bags, Trunks, Harness, Carriage Tops, &c., it is unequalled. It will notdden the Leather nor crack. It is not a spirit varnish. In Cartons, 4s. 6d. per dozen; 52s. per gross. Pack in Sawdust, 3s. 9d. per doz.; 43s. per gross. 2 1/2 %.

## AMERICAN MAGIC BRONZE

Is the best in the Market, and it can be used with good effect on Ornaments, Picture Frames, iron and Fancy Work generally, as well as for Boots and Shoes. In Cartons, 7s. per dozen. 2s. SOLD BY ALL WHOLESALE CHEMISTS AND DRUGGISTS' SUNDRIESMEN.

Factories: BOSTON; MONTREAL; 18 & 20 Norman's Buildings, ST. LUKE'S, LONDON.

## EWENS' CLARIFIED LARD, MARROW, SUETS, AND OILS.

JAMES EWEN & SONS are induced to give further publicity to these articles, the continued demand by all who have used them being satisfactory proof "that where purity of basis" in ointments, &c., is required, they are most desirable.

By their method of purifying, the fats are not chemically altered, but simply divested of all particles tending to decomposition, they are consequently available for the most delicate preparations.

Adeps. Benz. B. P. and Pharm. Lard (vide P. J. Vol. I. No. 8). Direct, "for Cash only," from

**JAMES EWEN & SONS' CLARIFIED FAT WORKS,**  
5 HATFIELD STREET, STAMFORD STREET, S.E.;

Or through any of the Wholesale Houses, with their usual credit, at a small advance.

**CAUTION.**—See that each package bears their label with name and weight.

# QUILLAIA.

A thoroughly good article for Cleansing Fatics.

Paint, Pitch, Grease Spots, &c., Easily and Instantly Removed.

## NO MORE VILE BENZINE!

QUILLAIA is Snow-white, and is delightfully fragrant

**Metallic Boxes ONE SHILLING at Retail**

WHOLESALE OF LEADING LONDON HOUSES.



# PAINTS. VARNISHES. WOOD STAINS.



VIENNA.

## READY-MIXED PAINTS,

In 1, 2, 4, 7, and 14 lb. Tins.

These goods are packed in the "Patent Self-opening Tins," which require no cutting. Tins painted to correspond with contents, and enclosed in printed wrappers.

## 28 USEFUL and SALEABLE TINTS,

Guaranteed to Dry Well.

## HANDSOME SHOW BOARDS

(Framed and Glazed), with Specimens of the Colours, supplied.

## ICES AND SAMPLE CARD ON APPLICATION.

MANUFACTURERS OF

## OIL VARNISHES

(Every description).

JAPANS.

BRUNSWICK AND BERLIN BLACKS.

TEREBINE.

FRENCH POLISH.

WHITE AND BROWN HARD SPIRIT VARNISHES.

KNOTTING.

LACQUERS.

DRYERS and GROUND COLOURS } of the finest quality.

DRY COLOURS, all Prices and Shades.

IMPORTERS OF OCHRE,  
ULTRAMARINE, &c.



LONDON.

## WOOD STAINS,

"SPECIAL."

MAHOGANY, OAK, WALNUT  
SATINWOOD,  
ROSEWOOD, EBONY.

Draught, or packed in 6d. bottles (8 oz.),  
capsuled and wrapped. Also in powder.

## SHOW BOARDS,

With specimens of the Stained Woods,  
supplied.

The demand for these Stains is steadily  
increasing. They possess great richness  
and truth of colour, and

ARE OFFERED AT A REASON-  
ABLE PRICE.

NOTICE.—All communications should be addressed to the Office—

LAYTON'S BUILDINGS, 199 HIGH STREET, SOUTHWARK, LONDON, S.E.

There is no connection with any firm of a similar name.

ESTABLISHED 1853.

# THE "SIMPLEX" PILL MASSER.

Eastern Dispensary,  
Leman Street, London, E.,  
May 29, 1884.

Gentlemen,—I have long wished to meet with a really efficient MECHANICAL substitute for the Pestle and Mortar. Your "Masser," in my hands has been so satisfactory, that I felt justified in introducing it to the notice of the Dispensary Department of the London Hospital.

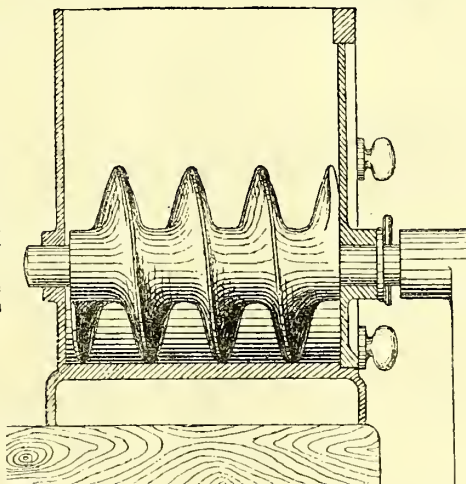
There it has been highly appreciated—its Time and Labour Saving qualities at once proving its value.

I remain, yours faithfully,

C. W. LEAPINGWELL,  
M.R.C.S., Eng.,

Resd. Med. Officer, Eastern Dispensary.

To the U. M. & C. M. Co., Ltd.,  
Queen Victoria Street.



AS EXHIBITED

AT THE

INTERNATIONAL  
HEALTH  
EXHIBITION,  
1884.

ALSO

POWDER MIXERS,  
CRUSHERS,  
MEAT CUTTERS,  
SAUSAGE MACHINES,  
&c., &c.

Made in sizes to mix from  $\frac{1}{2}$  lb. to 20 lbs. at a time.

The UNIVERSAL MIXING & CHOPPING MACHINE CO., L<sup>D</sup>

11 QUEEN VICTORIA STREET (Room 505), LONDON, E.C.





# ASKHAM BROS. & WILSON,

LIMITED,

## SHEFFIELD.

SOLE MAKERS OF

### LUCOP & COOK'S PATENT PULVERIZER.

THE MOST ECONOMICAL MILL IN THE  
MARKET.

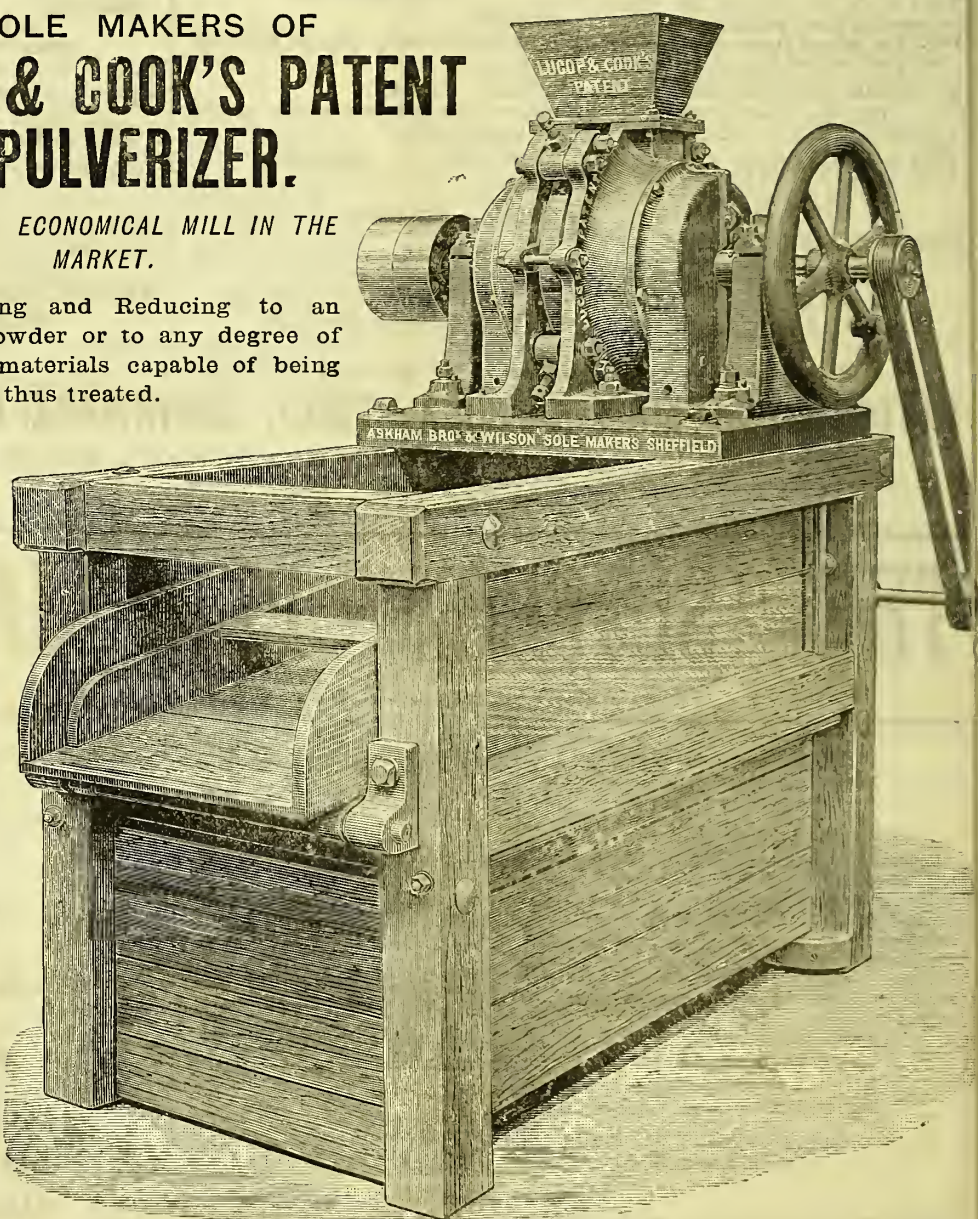
For Pulverising and Reducing to an  
Impalpable Powder or to any degree of  
Fineness, all materials capable of being  
thus treated.

Simple,  
Efficient,  
Durable,

combined with  
Small Cost.

Readily put to-  
gether and kept  
in order.  
Requiring very  
little power.

Write for full  
particulars.



B SIZE, COMPLETE WITH STAND.

Specially suitable for Pulverising Bone Ash, Plaster, Dry Soap  
Fuller's Earth, Glass, and any kind of Chemical  
Crystals, &c.



# IMPROVED AND LATEST MACHINERY

PARIS, 1878.

FOR

VIENNA, 1873.



## DRUG GRINDERS,

WHOLESALE

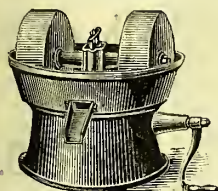
## CHEMISTS & DRUGGISTS,



## PAINT AND COLOUR MANUFACTURERS, AND OTHERS.

### HAND EDGE RUNNER MILL.

With Iron or Granite Rollers and Bed.

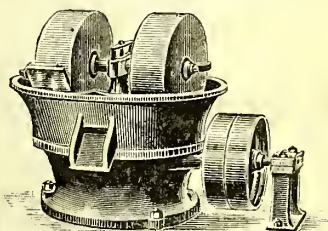


### HAND MIXING AND CRUSHING PAN MILL.

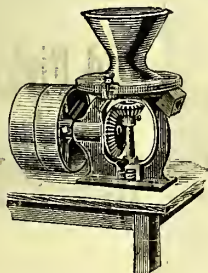
For Ointments,  
Pastes,Powders,  
&c., &c.

### POWER EDGE RUNNER MILL.

With Iron or Granite Rollers and Bed.

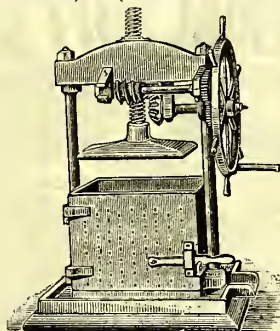


### NEW DRUG MILL.

For Ginger, Roots, and all kinds of friable  
materials.

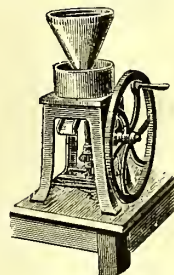
### COMPOUND PRESS.

For Tinctures, &amp;c. (made in Wood and Iron).

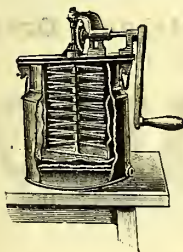


### HORIZONTAL MILL

For Dry Powders.

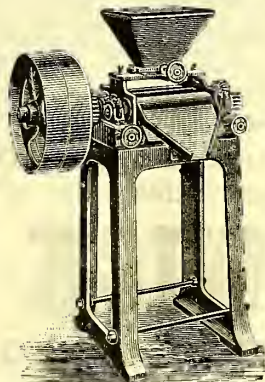


### NEW HORIZONTAL MIXER,

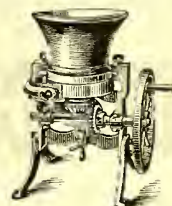
For Amalgamating Compounds, &c. (made with  
or without casing).

### NEW GRINDING MILL,

For Pastes, Colours, and Inks.



### IMPROVED PAINT MILL.

For Mixing and Grinding Colours in Water or  
Oil ready for use.

MACHINES FOR SPECIAL PURPOSES, EVAPORATING PANS, &amp;c., MADE TO ORDER.

Prices and particulars on application to

# FOLLOWS & BATE, LIMITED, Engineers,

## DUTTON STREET WORKS, MANCHESTER.



# "IMPERIAL"

(REGISTERED BRAND)

# SOFT SOAP

IN TINS.



1 lb. each net.

2 do.

3 do.

3½ do.

4 lb. each net

6 do.

7 do.

And Firkins &amp;

[Half-Firkins.]

May be had through all Wholesale Druggists, Oil Merchants, and Drysalters  
and (in wholesale quantities only) of the Manufacturers,

## THE CHISWICK SOAP CO.,

CHISWICK, LONDON, W.

Makers of the "10% Carbolic," "P.B. Olive," "B B B," "B B," and other Soft Soaps

**GOLD MEDAL, CALCUTTA EXHIBITION.**

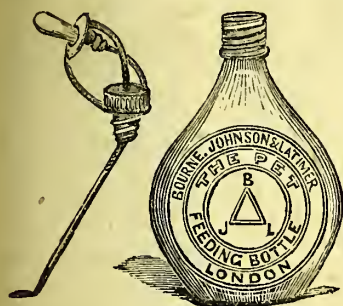
Also PRIZE MEDAL at the INTERNATIONAL HEALTH EXHIBITION  
for SOFT SOAPS.



# THE "PET" FEEDING BOTTLE

Is one of the Most Saleable Articles of its kind ever introduced.

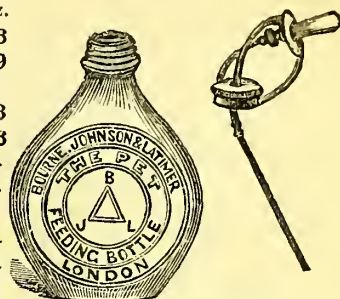
They are neatly put up in strong boxes with handsome labels. The following is a List of the most popular numbers:—



Nos. 17 and 22.

No.		Per doz.
6.	Green glass bent neck, white fittings	... 3/6
7.	" " black "	... 3/9
10.	" screw glass stopper, white fittings	4/-
11.	" " black "	4/3
14.	White flint glass, china caps	... 7/6
17.	" screw glass stoppers	... 8/-
19.	" pure tin caps	... 8/-
20.	" gilt metal caps	... 12/-
21.	" gilt china caps	... 12/-
22.	" glass screw stoppers	... 12/-

Nos. 6, 7, 10, and 11 are also supplied in boxes containing 1 gross at specially reduced prices.



Nos. 19 and 20.

## THE NEW NIGHT LAMP AND FOOD WARMER

Is the CHEAPEST LAMP ever offered to the Public.

Price 22/- per dozen.

Consumes about a Pennyworth of Petroleum Oil per week.



## THE NEW EARTHENWARE INHALER,

With Burnt-in Directions for Use.  
Price 18/ per dozen.

The only one that can be sold at 2/6 and yield a good profit.



## MUSICAL BELLS.

A new Indiarubber Teething Pad, with Nickel Plated Bell, very sonorous.

Twelve on a Show Card, 4/6.

## SPRAY PRODUCERS.

Glass Spray, for Perfume, as fig. 1	... ..	per doz.	18/-
" Throat, as fig. 4	... ..	"	27/-
Double-action Spray, as fig. 5, with Nickel Plated Mounts	... ..	"	36/-
" " " Vulcanite	... ..	"	36/-

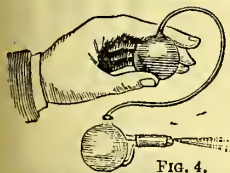


FIG. 4.



FIG. 1.

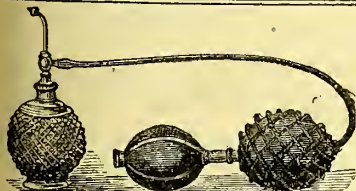


FIG. 5.

We have also a

## DOUBLE-ACTION SPRAY,

AS FIG. 5,

But with smaller Balls, at 14/- per dozen.

# BOURNE, JOHNSON & LATIMER

(SUCCESSORS TO BOURNE & TAYLOR) (ESTABLISHED 30 YEARS),

WHOLESALE AND EXPORT DRUGGISTS' SUNDRIESMEN,

34 & 35 CASTLE STREET, HOLBORN, LONDON, E.C.



# GEORGE TREBLE, JUN., FOOT & CO.,

## CHEMISTS' SHOP FITTERS AND SHOW-CASE MAKERS

PLANS AND ESTIMATES SUBMITTED.

FACTORY: 27 CANAL ROAD, WHITMORE RD., HOXTON, LONDON, N.

### THE ART JOINERY WORKS.

I am not only pleased, but delighted, with the shop you have just fitted for me. A. WALL, Bromley, Kent.  
For Chemists' Shop Fittings, I consider your style and workmanship unique.

WILSON & SON, Chemists, Harrogate.

Both my shops at Westgate and Clacton-on-Sea are much admired, and I am well pleased with your work.

C. H. GROSVENOR, Chemist, Clacton-on-Sea.

My shop has been admired by all that have seen it, and I am highly satisfied. R. ADAMS, Croydon.

### BOWLING & GOVIER, Medical Shop Fitters and Shop Front Builders

GUN STREET. BRUSHFIELD, BISHOPSGATE, LONDON.

You have now fitted up three shops for me, each one having given me greater satisfaction; and if I required 20 shops I should put them into your hands to fit up.

I. H. BATSMAN, Brondesbury, Kilburn.

Your Pharmaceutical Dispensing Counter I consider complete in every detail, and great care appears to have been taken in packing.

H. B. WILLIAMSON, Wanganui, New Zealand.

Your workmanship is excellent, and was completed with promptitude and dispatch.

F. J. CLARKE, Bracebridge Hall, Lincoln.

You may refer any applicant who requires his shop fitted to me. I am perfectly satisfied with the work done and the amount charged. The shop is universally admired.

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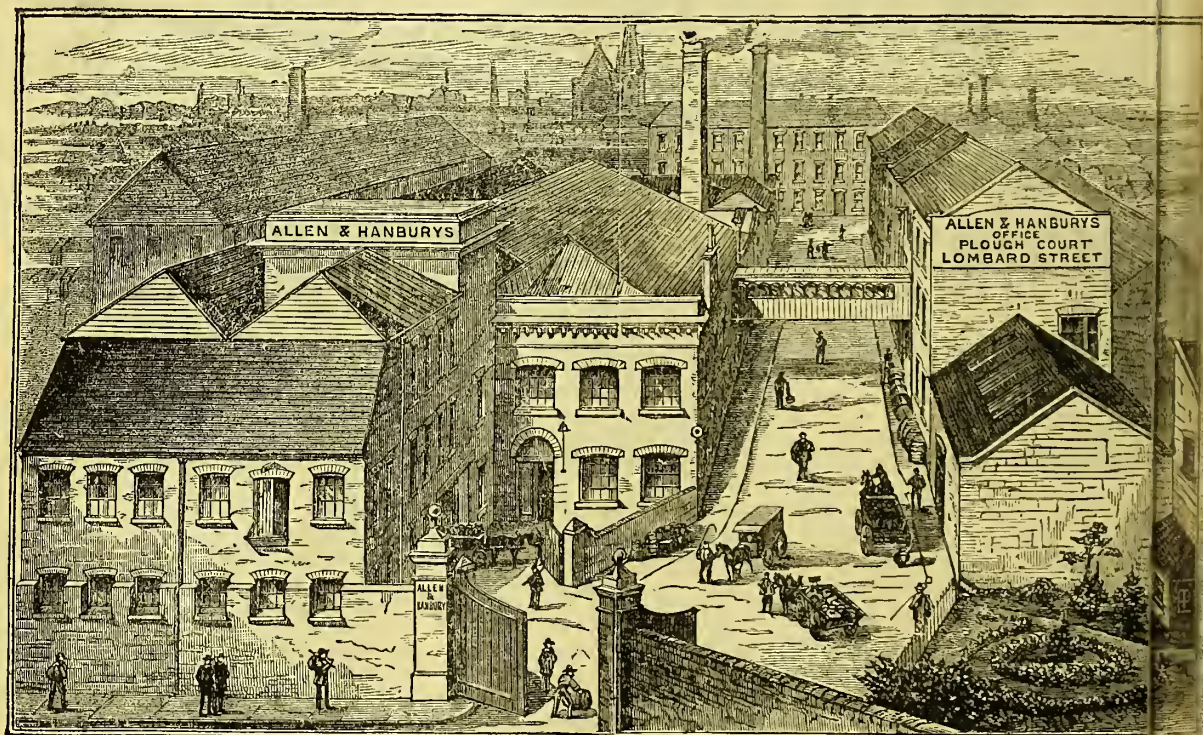
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TAYLOR, E. Plasters 80  
TAYLOR, T. F. J. Aërated Waters 80  
TAYLOR, THOMAS, M.R.C.V.S. Cleansing Drinks 80  
THOMAS Thompson & CAPPER Tincture of Steel 80  
THOMPSON, MILLARD & CO. (LIM.) Homoeopathic Medicines and Dentifrice Water 80  
THOROGOOD, G. R. Feeding Bottles, Druggists' Sundries 80  
TODD, A. M. Saddle Soap 80  
TOMLINSON & SON Menthol and Peppermint Oil 80  
TOOGOOD, W. Transfer Agent 80  
TOWLE, E. Inhalers and Earthenware Covered Pots 80  
TOWNSEND, J. Chlorodyne 80  
TREBLE, GEO., JUN., FOOT & CO. Handbills and Labels 80
- U**  
TRIPIER Shop Fitters 80  
TULLY Transfer Agent 80  
TYLER, HAYWARD, & CO. Soda Water Plant 80  
TYPER & KING Hippophosphates, Chemicals 80  
TYPER, P. Ketchup 80
- V**  
VALLET, L. Patent Stopped Bottle 80  
VAN ALBOTT Diabetes Foods 80  
VOGLER, C. A. St. Jacob's Oil 80  
VOMACKA, A. Unsers Handverkaufartikel 80
- W**  
W. BRAND DISPENSING BOTTLES, Bottles 1  
WAITE, T. H. Transfer Agent 80  
WALKER, T. Malted Food in Bulk 80  
WALKER & DALRYMPLE Tea 80  
WARNER, W. R., & CO. Coated Pills and Inghuria 80  
WATERSTON & SONS Sealing Wax and Mucilage 80  
WEDGWOOD, JOSIAH & SONS Mortars and Porcelain Goods 80  
WEST, THOMAS. (Kell's) Mona Bouquet 80  
WESTMINSTER COLLEGE OF CHEMISTRY AND PHARMACY School 80  
WHIFFEN, T. Quinine, Salicine, Strychnine, &c. 1  
WHITE & CO. Homoeopathic Medicines 1  
WIDENMAN, BROICHER & CO. Koch's Meat Peptones 80  
WILCOCKS, N. G. Soda Water Machinery, 63, Turnover Filling Machine 80  
WILLIAMS, M. Ketchup Varnish 1  
WILSON & SON Urinary Test Papers 1  
WOODS, M. W. Aërea Tooth Paste 80  
WOOLLEY, SONS & CO. Sanitary Nose Powder, Hair, Manufacturing Pharmacists 80  
WRIGHT & CO. Chlorodyne 1  
WRIGHT, LAYMAN & UNNEY Almond Essence, Ess. Oil Camphor 79, 1  
WYLEYS & CO. Coated Pills, Pharmaceuticals, Wholesale Druggists 1
- Y**  
YATES, W. S. Shop Fitter 1  
YOUNG, H. (G. Pattison, propr.) Corn Plasters 1
- Z**  
ZIMMERMANN, A. & M. Schering's and Finzelberg's Chemicals—Paraldehyde 1  
ZUCCATO & WOLFF Trippograph Copying 1



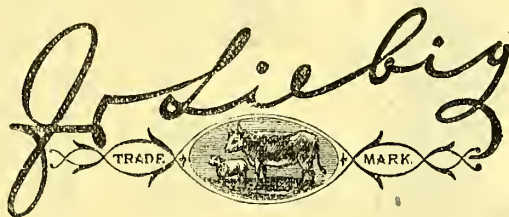
# LIEBIG COMPANY'S EXTRACT OF MEAT

INVALUABLE AND  
EFFICIENT TONIC FOR  
INVALIDS.



CAUTION.—In consequence of certain dealers making unauthorised use of Baron Liebig's photograph, title, &c., Baron H. von Liebig finds it necessary to caution the public that the LIEBIG COMPANY'S Extract of Meat is the only brand ever guaranteed as genuine either by himself or the late Baron Justus von Liebig. Purchasers must insist upon having the LIEBIG COMPANY'S Extract of Meat.

*Finest Meat-flavouring Ingredient for  
Soups, Made Dishes, Sauces, &c.*



**N.B.—Genuine ONLY with facsimile of  
Baron Liebig's Signature, in Blue  
Ink, across Label.**

## SUGAR-COATED PILLS AND GRANULES,

*In GLOBE-STOPPERED PATENT VASES for the DISPENSING COUNTER, &c.*

F. NEWBERRY & SONS have pleasure in calling the special attention of the Trade generally to this attractive and elegant series of

### COUNTER SHOW VASES.

The Vases are fitted with hand-painted, gold-bordered Labels, of which the following are usually in stock. It is to be noted that the purchaser should, when ordering, state explicitly the FORMULA and VASE-LABEL required, as for example—"Three Vases, No. 120," labelled "Aperient," "Liver," and "Compound Podophyllin" Pills. Soluble Sugar-coated:—

Antibilious Pills  
Aperient Pills  
Army and Navy Pills  
Aromatic Cachaous for the Breath  
\* Cathartic and Liver Pills  
Compound Colocynthis Pills  
" Phosphorus Pills.  
" and Quinine Pills

Compound Podophyllin Pills  
" Steel Pills  
Cough Pills  
Digestive Pills.  
Dinner Pills  
Female Pills  
Liver Pills

Nerve and Tonic Pills  
Neuralgic Pills  
Pil. Cathart. Comp.  
" Rhei Co.  
Podophyllin Granules  
Purifying Granules  
Tonic Pills

\* Particular attention is invited to Pil. Cathartic and Liver, No. 120, which has been very generally approved by the Trade and the Public wherever introduced.

" PIL. CATHARTIC AND LIVER," No. 120 (Warner & Co.).

GENTLEMEN.—While at the International Medical Congress, I received from your stall, in South Kensington, a small bottle marked "WARNER'S PIL. CATH. CO." These I have used with satisfactory results, and I wish to give a further trial in the Hospital of them as a substitute for Castor Oil after childbirth. Be kind enough to send a further supply of these Pills. Your early attention will oblige,  
Messrs. NEWBERRY & SONS.

Yours truly,  
HUGH MILLER, M.D.

Complete detailed Price List of Pharmacopoeia Pills (Sugar-coated) by W. R. WARNER & CO. forwarded on application to any part of the world by

**FRANCIS NEWBERRY & SONS,**

1 KING EDWARD ST., NEWGATE ST., LONDON, E.C.

ESTABLISHED A.D. 1746.

Prices are published in full in NEWBERRY'S ANNUAL CATALOGUES, to which attention is directed.





# THE MORGAN CRUCIBLE COMPANY

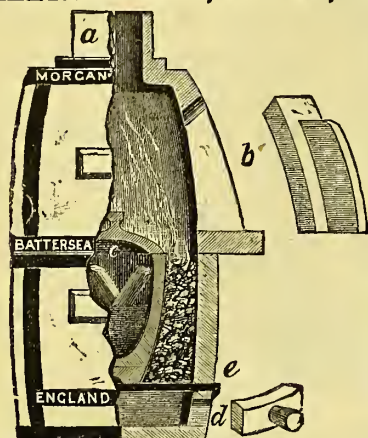
(THE PATENT PLUMBAGO CRUCIBLE COMPANY),  
Sole Manufacturers of MORGAN'S and SALAMANDER CRUCIBLES.

## PORTABLE FURNACES.

IRON BOUND. EXTERIOR DIMENSIONS.

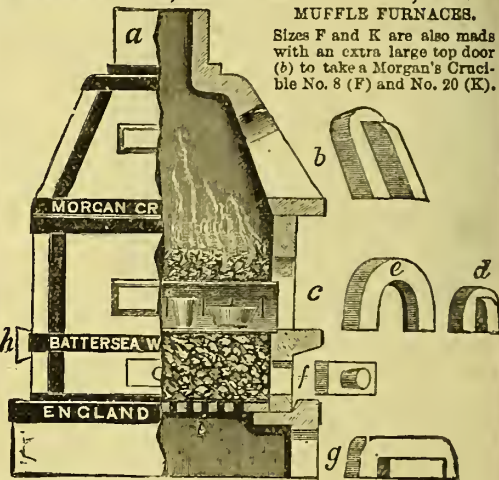
For MELTING GOLD, SILVER, COPPER, &c.

For ASSAYING, DENTAL WORK, &c.



a. Door for fuel.  
b. Door for muffle.  
c. Muffle arch.  
d. Door for regulating draft.  
e. Fire-clay grate.

No.	Diam. in.	Diam. milli.	Height in.	Hauteur milli.	For Morgan's Crucible.	No. 2	Price.
A	9 1/2	235	17 1/2	445	4	1	0 0
B	9 1/2	248	20	508	4	1	5 0
C	11	280	22	559	6	1	10 0
D	13 1/2	349	26	680	8	2	5 0
E	14 1/2	369	28	712	12	3	0 0
F	18	457	32	813	16	4	0 0



a. Door for fuel.  
b. Door for muffle.  
c. Muffle arch.  
d. Door for regulating draft.  
e. Fire-clay grate.  
f. Socket on which to fix iron chimney.  
g. Door for stirring fire.  
h. Support.

MUFFLE FURNACES.

Sizes F and K are also made with an extra large top door (b) to take a Morgan's Crucible No. 8 (F) and No. 20 (K).

Exterior dimensions. Interior dimensions.

No.	Width and depth front to back	Largest et profondeur	Width and depth front to back	Largest et profondeur	For Battersea Muffles	Price
A	12 1/2	318	9 1/2	235	ABCD	£2 0
B	13 1/2	337	10 1/2	254	BCDE	2 5
C	14 1/2	369	11 1/2	280	CDEFH	2 10
D	15 1/2	394	12 1/2	305	DEFGH	3 0
E	16 1/2	414	13 1/2	324	EFGHJ	3 10
F	17 1/2	445	14 1/2	350	FGHJ	4 0
K	23	585	19 1/2	483	KL	8 0

## ROASTING DISHES.

Diam. in.	Diam. milli.	Per doz.	Diam. in.	Diam. milli.	Per doz.
2 1/2	64	1/3	4	102	1/9
3	77	1/6	5	127	2/

Larger sizes to order.

## SCORIFIERS. (PER GROSS.)

No.	Diam. in.	Diam. milli.	Price.	No.	Diam. in.	Diam. milli.	Price.
1	1 1/2	38	3/	2 1/2	1 1/2	38	3/
1 1/2	1 1/2	38	3/6	2 1/2	1 1/2	38	3/6
1 1/2	1 1/2	38	4/	3	1 1/2	38	4/
2	1 1/2	38	4/6	3 1/2	1 1/2	38	4/6
2 1/2	1 1/2	38	4/6	4	1 1/2	38	4/6



## MUFFLES.

With or without apertures.

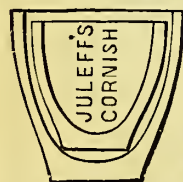


No.	Long. in.	Wide. in.	High. in.	Price. per doz.	No.	Long. in.	Wide. in.	High. in.	Price. per doz.
A	7	3 1/2	2 1/2	12/	G	11	4	3 1/2	21/
B	7 1/2	4	2 1/2	15/	H	10 1/2	5 1/2	3 1/2	25/
C	8	4 1/2	3	18/	J	12	6	4	33/
D	8 1/2	5	3 1/2	21/	K	14	8	5	48/
E	9	5 1/2	3 1/2	24/	L	15	9	6	54/
F	10	6	4	27/					

Sizes A to F, also K, are suited for the Furnaces of the same letters.

G to L have one slit at back only, none at sides.

In addition to those priced above, Muffles are made of all shapes and sizes, suitable for Assayers, Enamellers, Dentists, &c.



## ASSAY CRUCIBLES.

FOR COPPER.

CORNISH FORM AND QUALITY (JULEFF).

No.	High. in.	Hauteur milli.	Diam. in.	Diam. milli.	Price. per doz.
Nest of Two	3 1/2	83	3	77 1/2	2/ per doz
Single..	2 1/2	64	2 1/2	51	1/

All sizes and shapes to order.



## FOR TIN.

No.	High. in.	Hauteur milli.	Diam. in.	Diam. milli.	Price. per doz.
1	3 1/2	83	3	77 1/2	6/ per doz.

Covers, 2/ per doz.

## FOR LEAD.

3 in. diam., .077 diam. milli., with Covers, 2/3 per dozen.  
Other sizes to order.

## FOR GOLD.

THESE ARE PERFECTLY SMOOTH, AND OF THE CORRECT POROSITY.

No.	Diam. in.	Diam. milli.	Height in.	Hauteur milli.	Per doz.
A	1 1/2	38	1 1/2	38	2/
B	1 1/2	38	1 1/2	38	2/
C	1 1/2	38	1 1/2	38	2/
D	1 1/2	38	1 1/2	38	2/

Covers for either size, 8d. per doz.

THE MINT OF THE UNITED STATES AT SAN FRANCISCO,  
OFFICE OF THE ASSAYER,

SAN FRANCISCO, CAL., April 19, 1877.

SIRS,—I have tested and used the Assay Crucibles and Annealing Cups, and can with assurance recommend their superior quality and durability.

Respectfully yours, &c.,  
O. D. MUNSON, Assayer.

AACHEN, July 23, 1880.

For several years past I have used Fire Clay Assay Furnaces, Muffles, and Crucibles made by the Patent Plumbago Crucible Co., Battersea Works, London S.W., and am so thoroughly satisfied with them that I strongly recommend their manufacture to all laboratories, refiners, and smelting works.







(Signed) PROF. DR. DÜRRE.  
Der Königl. Rheinisch Westfälischen Polytechnischen Hochschule.


NOTICE.—Care should be taken in all instances, when ordering, to specify the Crucibles, &c., manufactured by

THE MORGAN CRUCIBLE CO. (Sole Manufacturers of Morgan's), Battersea Works, LONDON, S.W.  
and Salamander Crucibles



Are manufactured of the same kind of ingredients as those sanctioned and ordered by Dr. Andrew Smith, Director-General of Her Majesty's Army and Navy Ordnance Medical Department, for the use of the Soldiers and Marines in Scutari Hospital.

LEATHER PLAISTERS.		No.	Full Size of Leathers.	Retail Prices.	Per doz.	Royal Balsamio Plaister.	Cod Liver Oil.	Plain Plaister.	Emp. Roborans or Calefaciens	Emp. Bella- donna. No. 1.	Emp. Bella- donna. No. 2.
			Inches.	d.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Heart Shape		1	3 x 4½	1 size.	„	0 8	0 8	0 8	0 8	1 4	1 0
		2	4¼ x 6	1½ „	„	1 0	1 0	1 0	1 0	2 0	1 6
		3	4½ x 7½	2 „	„	1 6	1 6	1 4	1 4	2 8	2 0
		3½	5½ x 7¾	3 „	„	2 3	2 3	2 0	2 0	4 0	3 0
		4	6½ x 8½	4 „	„	3 0	3 0	2 8	2 8	5 4	4 0
	5	8 x 9¾	6 „	„	4 6	4 6	4 0	4 0	8 0	6 0	
Long Shape		1	2¾ x 4	1 „	„	0 8	0 8	0 8	0 8	1 4	1 0
		2	4¼ x 6¾	2 „	„	1 6	1 6	1 4	1 4	2 8	2 0
		2½	4½ x 8½	3 „	„	2 3	2 3	2 0	2 0	4 0	3 0
		3	5¼ x 9¼	4 „	„	3 0	3 0	2 8	2 8	5 4	4 0
		4	6½ x 11	6 „	„	4 6	4 6	4 0	4 0	8 0	6 0
	5	7½ x 14½	8 „	„	6 8	6 8	6 0	6 0	12 0	8 0	
Oval Shape		1	4¼ x 6½	2 „	„	1 6	1 6	1 4	1 4	2 8	2 0
		2	6¼ x 8½	4 „	„	3 0	3 0	2 8	2 8	5 4	4 0
		3	7½ x 9½	6 „	„	4 6	4 6	4 0	4 0	8 0	6 0
Saddle Shape		1	6½ x 12½	6 „	„	4 6	4 6	4 0	4 0	8 0	6 0
		2	7 x 15	8 „	„	6 8	6 8	6 0	6 0	12 0	8 0
		3	8 x 16	12 „	„	8 8	8 8	8 0	8 0	15 6	12 0
Wrist		1	3 x 10¼	3 „	„	2 3	2 3	2 0	2 0	... ..	... ..
Knee		2	4¼ x 15	6 „	„	4 6	4 6	4 0	4 0	... ..	... ..

		BREAST PLAISTERS.		No.	Size of Leather	Retail Prices.	Per doz.
						d.	s. d.
Emp. Plumbi, for Ladies' Breasts .....		1	Diam. 6 $\frac{1}{2}$ in	4	size	2	8
Emp. Plumbi, for Ladies' Breasts ..		2	" 7 $\frac{1}{4}$ "	6	"	4	0
ditto spread on Chamois ..		1	" 6 $\frac{1}{2}$ "	..	"	4	0
ditto ditto ..		2	" 7 $\frac{1}{2}$ "	..	"	6	0

BREAST PLAISTERS.		No.	Size of Leather	No. 1 Quality. Per doz.	No. 2 Quality. Per doz.
				s. d.	s. d.
Emp. Belladonna, for Ladies' Breasts		1	Diam. 6 $\frac{1}{2}$ in.	5	4
ditto .....		2	" 7 $\frac{1}{4}$ "	8	0
ditto spread on Chamois ..		1	" 6 $\frac{1}{2}$ "	8	0
ditto ditto ....		2	" 7 $\frac{1}{2}$ "	12	0

**HOSPITAL PLAISTER**, on Black Cloth, 16 in. wide, doz. yds. 8/0  
 " " on White " " " 8/0  
**Every other description of Plaister used in Pharmacy or Private Formulæ**  
 spread on any material, to suit any climate.

PLAISTERS, SPREAD.—Prices per Dozen Yards.						
16 Inches in width.						
NAME	Glazed Cloth	Un glazed Cloth	Linen	Swans- down	Mole- skin	Skins of Leather
Emp. Adhæsivum Opt. . .	4/0	5/6	12/0	12/0	21/0	4/0
Adhæsivum . . .	3/8	..	..	..	..	..
" Ammon. C. Hydrarg. . .	16/0	..	..	20/0	36/0	5/6
" Antim. Pot. Tart. . .	10/0	..	..	24/0	30/0	4/0
" Belladonna . . . . .	18/0	20/0	27/0	27/0	36/0	5/6
" Calefaciens . . . . .	11/0	12/0	15/0	15/0	24/0	4/6
" Cerat Saponis . . . .	8/0	9/6	14/0	14/0	24/0	4/6
" Dreadnought . . . .	9/0	10/0	14/0	14/0	24/0	4/6
" Elemi . . . . .	9/0	10/0	14/0	14/0	24/0	4/6
" Ferri . . . . .	9/0	10/0	14/0	14/0	24/0	4/6
" Galbani . . . . .	14/0	..	..	24/0	30/0	4/6
" Hydrarg. . . . .	14/0	15/0	18/0	18/0	27/0	4/6
" Iodine . . . . .	16/0	..	..	30/0	36/0	5/6
" Opii . . . . .	18/0	20/0	27/0	27/0	36/0	5/6
" Picis Co. . . . .	11/0	12/0	15/0	15/0	24/0	4/6
" Plumbi . . . . .	5/6	6/6	12/0	12/0	21/0	4/0
" Potass. Iodid. . . . .	16/0	..	..	30/0	36/0	5/6
" Resinæ . . . . .	5/6	6/6	12/0	12/0	21/0	4/0
" Saborans . . . . .	6/0	7/0	12/0	12/0	21/0	4/0
" Saponis Alb. . . . .	5/6	6/6	12/0	12/0	21/0	4/0

MANUFACTURED BY W. MATHER,  
**DYER STREET, HULME, MANCHESTER, ENGLAND.**  
 PRICE LISTS SENT ON APPLICATION.  
 London Wholesale and Export Agents: Messrs. MACE & HALDANE, 77 Milton Street, London, E.C.



# MAY, ROBERTS & CO.,

## 9 CLERKENWELL ROAD, LONDON

(Three Minutes' Walk from Aldersgate Street Station).

CATALOGUE of Druggists' Sundries, Patent Medicines, &c  
sent post free on application.

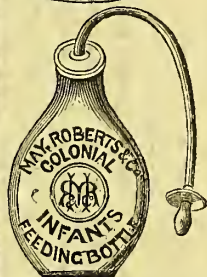


### FEEDING BOTTLES

Green Glass Bottles, Boxwood-topped Corks, with Best White Rubber Fittings.

"THE POPULAR" ... 23/5 per gross.

Packed in One-gross Casks (Cask free).



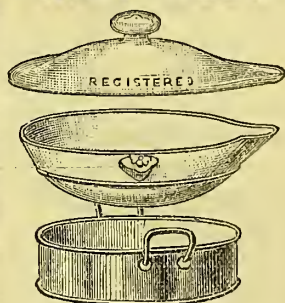
"THE COLONIAL" ... 25/5 per gross.

Packed in One-gross Casks (Cask free).

The above, with White Glass Bottles, 2/- per gross extra.

If with Black Rubber Fittings, 4/- per gross extra.

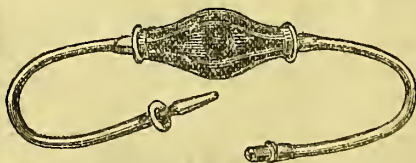
### "MAY-ROBERTS" WATER BATH. REGISTERED.



This Water Bath will supply a long felt want amongst Chemists and Perfumers, where small quantities of material have to be dealt with.

The old form of Water Bath necessitates the use of second vessel for pouring the melted Pomade Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover. 5-pint, 5/6 each.

### HIGGINSON'S ENEMAS.



BEST Quality Rubber—Green, Black, or White—complete with Vagina Pipe and Shield ... .. per dozen 26/6

Ditto, Disconnecting ... .. 27/6

SECOND Quality—Grey Rubber—complete with Vagina Pipe and Shield ... .. per dozen 18/6

5% discount on £5 worth, with or without other "Sundries."

NO TRAVELLERS EMPLOYED. Buyers are therefore spared their expenses  
COMPARE OUR PRICES.



# EXCHANGE COLUMN.

**TERMS.**—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the Advertisement by the Publisher of *THE CHEMIST AND DRUGGIST*, and all correspondence relating to it must be addressed to the "Publisher of *THE CHEMIST AND DRUGGIST*, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The Publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

## Dental and Surgical.

Water-bed, nearly new, 70s., 48 by 36; also one older, 30s., 40 by 30. Vint, Hastings.

## Drugs and Chemicals.

Quantity drugs, very cheap. 45/8s.

Surplus stock freshly-cleaned quicksilver, 1s. 7d. lb. Beech, Chemist, Ladywood, Birmingham.

Quinine (Howard's), 2 4-oz. bottles, 4s. 6d. oz.; pot. iod., 5 lbs., 6s. lb.; chlorodyne, 2 lbs., 4s. 6d. lb., and few others cheap, being stock removed from branch; list sent. 52/11.

A few bottles of quicksilver at market price, less discount; a few 1-oz. bottles of Symes' musk at 21s. each, less for quantity; a few pounds Howard's iodide of potassium at 11s. 3d., and re-sublimed iodine at 11d., per oz. T. P. Richardson, Alford, Lincolnshire, subject to being in stock.

## Optical.

Offers wanted for about 9 doz. steel spectacles, of good quality. 35/17.

## Proprietary Articles.

Four 5s. Niehol's fluid annatto, 10s. lot. 60/37.

Flockmaster's dip, 40 tins, fresh, for sale, cheap. Robertson, Chemist, Oban.

Three dozen Barrow Evans' 1s. hair-restorer; 18s.; unsoiled. Address, "Bache," 30 South Street, Worthing.

Myers' Royal cattle spice, fresh, in any quantity; cash or exchange for saleable patents; no reasonable offer refused. 45/11.

Ten and a half doz. Thompson & Capper's homoeopathic tinctures, 6d. bottles, going kinds, quite new; 20s. Severs & Bateson, Kendal.

4 doz. 1s. Fox's palatable cod-liver oil, at 7s. 3d. per doz.; 8 doz. 2s. ditto, at 14s. 6d.; 3½ doz. 1s. Fox's castor oil, at 7s. 3d., all fresh and clean. 22/10.

## Apparatus.

Machine for mixing powders, for sale; price 15s. H., 5 Wymering Terrace, Laveuder Hill, London, S.W.

## Educational.

Microscope, very powerful, for 35s.; also Carlyle's works, 18 vols., for 25s. J. Thomas, 189 Camp Hill, Birmingham.

Twelve stamps for the questions of a successful student at last examinations (Minor). "Chemist," 51 Irwell Street, Widnes.

The questions given to a successful Minor candidate at the December examination. Send 12 stamps to "Chemist," 14 Hedon Road, Drypool, Hull.

Set of illegible autograph prescriptions (original), 2s. 6d., as presented to the Pharmaceutical Society of Ireland for their examinations; 30 prescriptions (catch and difficult) given to dispense at Minor during past 12 months, 2s.; 50 questions asked of successful students at last Minor, 1s. 1d.; lot of cheap, almost new, books; stamp for list. Saunders, Medical Tutor, 6 Rochester Square, N.W. (Note change of residence.)

"Caesar," 9d.; Giles' "Key," 1s. 3d.; "Thema," 3d.; Rust's "Latin Prose," 9d.; Mason's Grammar, 6d.; Alcock's Grammar, 4d.; Wills' "Preliminary Exercises," 9d. "Alpha," 169 Hemmingsford Road, N.

## Literature.

*Pharmaceutical Journal* posted every Monday; any reasonable offer accepted. Robertson, Chemist, Oban.

What offers for several years *Chemist and Druggist* and *Pharmaceutical Journal*? Bygott, Buxton Road, Huddersfield.

A lot of Goddard's "Chemist's Companion," published at 5s., sent free by post for 18 stamps. P. A. Stevens, Chemist, Gospel Oak, N.W.

Seven past years of *Chemists' and Druggists' Diary*, all in good condition; also *Chemist and Druggist* for 1884; highest offer accepted for all or any; carriage paid. 253/38.

"Judd's Lithographed Minor Postal Lectures and Memories," half-price, 5s. The following 1s. each:—Wills' "Analysis," Watts' "Organic Chemistry," Steggall's "Botany" (coloured plates), "Money by Advertising," Thompson's "Conspectus," "Caesar Made Easy," Armstrong's "Composition," Smith's "Principia Latina," to "Preliminary Arithmetical Tests," and "Mnemonic Key to Composition," Jobson's "Teeth" (plates), Owen's "Pharmacy," Hughes' "Photography," Sutton's "Calotype Process," Carpenter's "Physiology," 2s.; "400 Entertaining Experiments," 2s. "Minor," 13 Gladstone Avenue, Wood Green, N.

## Soda-water Plant.

Barnett & Foster have some second-hand soda-water machinery of their own for sale. Apply, 26r Eagle Wharf Road, Hoxton, N.

Second-hand soda-water plant—several in stock. Address, Bratby & Hinchliffe, Sandford Street, Ancoats, Manchester.

Shop drawers, bottles, glass cases, counters, utensils, shelving and warehouse fittings, and stock for sale. F. Parsons, Leicester.

Boroskill's tube-machine for patent bottles, with glass barrel syrup-pump; pressure-gauge, 4-inch, indicated to 200 lbs.; both in good condition; offers wanted. Varney, Chemist, Oxford.

Big double machine, with gaswork and racks, 2,000 dozen per day; also a 2½-pump 7-gal. cylinder machine, toothed wheels, agitator, large gasworks, and bottling-racks, all second hand, as good as new; bargains. N. G. Wilcocks, Bath.

Soda-water Plant.—Barnett & Foster, fig. 2, No. 4, together with gasometer and generator, very little used; also bottling-post, with syrup-pump (Rose's), syphon-filter (Barnett & Foster), original cost, 73s., price complete, 40s., or separate. Benjamin Baker & Co., Jersey.

Second-hand soda-water machine by Barnett & Foster, with half-horse "Otto" vertical gas-engine, all in perfect working order; makes 300 dozen daily; ready for immediate delivery; may be seen in action; price for all, 60s. F. Parsons, Gallowtree Gate, Leicester.

## Shop Fittings.

Splendid show-jar, measures 30 in. high without the cover; cheap, 4l. 53/8.

Show-bottles, specie-jars, shop-jars (all sizes and colours), lamps, store-bottles, glazed cases, 21 Broadway, Deptford.

Fireproof safe, with drawer and duplicate keys, size 24 by 18 by 18, by Griffiths; good as new; 4l. W. Bntcher, Chemist, Blackheath, London.

One-arm nickel-plated fountain for counter use, and 6-gallon portable copper cylinder for aerated water; tubing, &c., all complete, and as good as new; price 6l., cost 12l. Sage, Chemist, Frome.

A Bargain.—Fixtures and fittings complete, suitable for a first-class chemist trade, as used by the late Mr. H. E. G. Symmons. Apply to B. G. Hodges, 11 Charles Street, Milford Haven.

For immediate disposal, fixtures, fittings, stock, and implements of trade; nearly new; lowest cash price, 40l. Apply A. H. Alfred Sinclair, Esq., Vestry Street, Humberstone Gate, Leicester.

Japanned-tin case, two doors, handles, and buttons to fasten under bar in centre of front; 14 inches high, 8 deep, 20 long; two shelves; what offers? Cooke, East Howe, Wimborne.

Surplus Stock.—Composition mortar and pestle, No. 12, 9s. 6d.; quart iron mortar, 1s. 9d.; mahogany pill-machine, 24, nearly new, 12s. 6d.; 5-grain finisher, 6d.; powder-folder, 1s.; lot brown Turkey sponge, cheap. Campkin, Cambridge.

Nest of 69 mahogany-fronted drawers, 4 lockers under, 4½ feet by 8 feet, second hand; cost 9l. 10s.; drawers in good condition; labels want renewing; price 4l. 10s., or offers; will sell with or without lockers. H. Payne, Market Rasen.

Pill-machine, good as new, for 24, 10s.; counter-scales, fig. 4, 2-inch walnut, marble top, in perfect order, 12s.; glass case, mahogany, for end counter, 36 by 24, tablet, "Dispensing Department," over, 1l., or 1l. 18s. taking all three. J. E. Eastman, Chemist, Tottenham.

Second-hand Fittings.—About 25-foot druggist wall-fittings, 12-foot wall-case, window enclosure, dispensing-screen, desk and case, cigar case, four carboys, two specie jars and stands, drug-scales, 14 dozen bottles and pots; 38l. Hawke & Son, London.

Offers wanted for 12 32-oz. lozenge-bottles, 6 32-oz. rounds, 6 quart syrups, all shield-shaped, gold labels, bottles and labels perfect; also 12 4-lb. dark blue canopy-topped ointment-jars; no labels, all perfect, except 2 muddled covers. J. N., 76 St. George's Road, Tufnell Park, London.

Bent plate-glass counter-case, mirror backs, sloping shelf 5 ft. 10 in. long, 10 wide, as fig. A 3 Maw's, only with two sheets of bent glass, one of which is cracked, but need not be replaced, and as so used by us for 6 years; cost 8l.; price 3l., or exchange. Thresh, Buxton.



**Second-hand Glass, &c.**—Two specie jars, arms, covers, 21 in., and stands, 3*l*.; 4 specie jars, scrolls, covers, 28½ in. high, and plinths, 30*s*. each; three 3-gal. carboys, and one 2-gal., flat front, and stands, 27*s*. 6*d*.; two 3-gal. cylinder fronts, 10*s*.; 15 1-lb. blue pots, and 55 stoppered rounds, no labels, 38*s*. Hawke & Son, London.

**Second-hand Fittings.**—Bent plate-glass counter-case, 46 in. long, 23 in. wide, 3 trays, 3*l*.; flat ditto, 39 in. long, 19 in. wide, 2*l*. 10*s*.; curved counter glass case, 32 in. long, 21 in. wide, 1*l*. 15*s*.; flat ditto, 36 in. long, 19 in. wide, 2*l*. 10*s*.; curved plate-glass counter case, 42 in. long, 20 in. wide, Treble's, 2*l*. 2*s*. imperfect; large upright ebonised wall glass case, 4 doors, spring catches, 92 in. long, 72 in. high, 14 in. deep, in 4 distinct sections, 5*l*. 10*s*.; mahogany-top counter, 9 feet long, consisting of 4 zinc-lined bins, 4*l*.; 2 upright ebonised glass cases, each 153 in. long, 32 in. high, 15 in. deep, each with 8 doors and spring catches, suitable for counter fronts, 4*l*. 10*s*. each; nest 28 shop-drawers, 2*l*.; set 22 4-lb. blue-labelled ointment-jars; quantity stoppered shop-bottles, all sizes, with and without gold labels; 20-oz. engraved acid-bottles; 2 prescription-desks; 2-gallon iron mortar and pestle, 12*s*. 6*d*.; 3-gallon ditto, 18*s*.; 1 24 5-grain pill-machine, 11*s*. 6*d*.; 1 pair 2-lb. French counter-scales, 12*s*.; 1 pair 4-lb. ditto, 15*s*. 6*d*. Simcock, 17 Guildford Street, Leeds.

**E. Natali** has for sale a large quantity of fittings, suitable for chemists, grocers, &c., which must be sold at once on account of alterations; no reasonable offer refused. Glass counter-cases, bent plate-glass, 2 ft. long, 30*s*.; 2 ft. 6 in. long, 35*s*.; 3 ft. long, 60*s*.; 3 ft. 6 in. long, 70*s*.; 4 ft. long, 75*s*.; 5 ft. long, A 18, 5*l*.; 6 ft. long, A 18, 5*l*. 10*s*.; 8 ft. long, 8*l*.; 3 ft. long, A 4, 80*s*.; tooth-brush cases, bent-plate, A 10, to open at back, 30*s*.; ditto, revolving-front, 55*s*.; A 9, 30*s*.; plate-glass cases, A 2, 3 ft., 35*s*.; 3 ft. 6 in., 40*s*.; 4 ft., 50*s*.; 5 ft., 60*s*. Wall-cases, 12 ft. long, 6*l*. 10*s*.; 10 ft. long, 9 ft. high, 20*l*.; 11 ft. long, 7*l*.; 7 ft. 6 in., as A 86, 11*l*. 10*s*. Fixtures, drawers, shelving, with cornice over, A 84, 6 ft. long, 6*l*.; 8 ft. long, 8*l*.; 10 ft. long, 10*l*.; 12 ft. long, 12*l*.; also as A 82, 12 ft. long, with cupboards, drawers, shelving, &c., 9*l*. Counters, painted-fronts, mahogany-tops, 5 ft., 6 ft., 8 ft., 10 ft., 12 ft., 14 ft.; ditto, with polished oak fronts, 7 ft., 10 ft., 14 ft., counters with mahogany polished fronts, 9 ft. long, 12 ft. long, 18 ft. long; counters, with mahogany and plate-glass cases in front, 4 ft., 6 ft., 9 ft., 12 ft., 14 ft.; dispensing-screens, 5 ft. 6 in., 7 ft. 6 in., as fig. A 55; 3 ft., 3 ft. 6 in., 4 ft., as A 54; dispensing-screens, any size, glass case at each side, silvered plate-glass centre, with marble slab in front, very elaborate, 7*l*.; desks, with cases in front, 40*s*. 50*s*. 60*s*. with silvered glass back, inside case, 65*s*.; sponge-cases, A 41, 60*s*.; A 43, 95*s*.; show-stands, A 37, 55*s*.; as fig. 5, 50*s*.; fig. 6, 60*s*.; specie-jars, with gold covers, 27 in. high, royal arms, &c., 80*s*. pair; a quantity of blue and white ointment-jars; mortars (new), funnels (new), pill-machines (new), to cut 24, 16*s*.; black stock bottles (new), labelled any names, 15*s*. doz.; Royal arms, splendid condition, for outside shop, 45*s*.; a 12-ft. run drawers, with shelves and cornice over, lockers under, glass knobs and glass labels, 7*l*. 10*s*. **E. Natali**, 207 Old Street, near Pitfield Street, London.

**Second-hand Fittings.**—Plate-glass counter-case 43 in. long, 16 in. wide, trays, 2*l*.; mahogany wall-case, three bent plate-glass flaps, silver and plate ends, glass drawers, 73½ in. long, 21 in. deep, 19½ in. high, 7*l*. 10*s*.; counter-case, as Maw's A 4, 42 in. long, 25 in. wide, 23 in. high, no carving, 6*l*.; mahogany wall glass-cases, lower compartment with open shelving pilasters, 132½ in. long, 100 in. high, 8*l*.; mahogany window-enclosure, ornamental glass; plate-glass facia, black ground, embossed "Pharmaceutical Chemist," 146½ in. by 14 in., 3*l*. 10*s*.; 13 plate-glass shelves, polished edges, various lengths and widths, 2*s*. each; 2 ditto, 68 in. by 6 in., and 6 brackets, 15*s*.; 2 counter gas-pillars, 15*s*.; 5 window do., 12*s*. 6*d*. Hawke & Son, Wild Court, Great Wild Street, London.

### Formulæ.

Small-pox wonderfully cured without pitting. Send 18 stamps for recipe to T. Ridler, 37 Milk Street, Bristol.

I offer copy of my recipe-book, 80 first-class recipes, for *Chemist and Druggist*, 1885, week old, J., 28 Whitefriars Road, Hastings.

Splendid marking-ink, equal to Bond's, extensively used in unions, &c., formula 7*d*. post free; lime-juice and glycerine, antiseptic dentifrice, 4*d*. each; send stamp for list of cheap genuine formulæ. Bahington, Newhaven, Sussex.

Ten popular perfumes, equal to the leading brands, and far superior to any published formulæ, 1*l*. 10*s*.; a single recipe, 5*s*.; these have now been retailed seven years, and are preferred by my customers before all other makes. Pharmaceutical Chemist, 124 Queen's Road, Norwich.

**Devoniensis Lavender Water.**—Testimonial:—"You have inaugurated a new era in the manipulation of lavender water;" copies still forwarded on receipt of half-crown postal orders; am prepared, having accepted appointment, to dispose of all right and title in above, and to receive offers for same. Stamp for replies. "Devoniensis," Broad-hempston, Totnes.

**Fragrant foaming dentifrice** (like "Floriline"); marking ink, *sine* silver (aniline), writing executed defies chemicals; effervescing fruit saline (resembles Eno's); magic neuralgic drops (never-failing remedy); quinine and iron tonic (resembles Pepper's); lime-juice and glycerine (inseparable, white as milk); blue-black ink (non-corrosive, *sine* iron or galls); cherry tooth paste (never ferments, like Gosnell's); brilliantine (inseparable, like Rimmel's); pill-coating, (pearly white, no mucilage or mastic used); glycerine jelly (perfectly transparent); crimson marking ink; hair-restorer (colourless, no deposit, *sine* silver); aromatic vinegar; toilet vinegar (as Rimmel's); plate-powder (like Stevens' "Silicon"); Oleum Flavum Conc., for pomades (colour stable); soluble essence ginger (like Hay's); corn solvent, clear (not acid); liquor copaiba comp. c. huclui et matico (mixes clear with water); gonorrhœa paste, excellent (Dr. Ricord's); taraxacum and podophyllin (resembles Pepper's); with many others; send stamp for list, stating wants. The toilet preparations are identical with those prepared by a wholesale West-end firm; others equally good; all inexpensive to make; 5*s*. each (five for 1*l*.). Readers are cautioned against cheap and worthless imitations. I was first to advertise formulæ in this journal. "Analyst," care of Mr. Warnes, 6 Rochester Square, N.W. (Note change of address.)

**Reliable Recipes**, wanted daily, all guaranteed genuine, as supplied to over 1,000 chemists at home and abroad; particulars of fees on application; detailed list of 280, post free. Not every advertisement these last four years in this Journal. "Satisfaction guaranteed." All communications are strictly confidential, or I could give over 500 testimonies.—"Glycerine Cream," an elegant preparation for roughness of skin, invaluable ball, certain sale; "Entirely New Remedy for Toothache," gives instant ease, not injurious to other teeth; "Nigerine," jet-black, verproof patent blacking, cheaper, sweeter, and better than Nubian; "Digestive Re," best and cheapest sauce in creation, 3*s*. 6*d*. gallon; "Lupuline Bitters," equal to American in every respect, one-third price; "Limbs and Glycerine," elegant, creamy, snow-white, quite inseparable, pronounced best in market; "Foaming Dentifrice," resembles Floriline, costs one-eighth; "Rheumatic Embrocation," most excellent, cannot be surpassed in cheapness and efficacy; "Blood-purifying Powder" (Lobn surgeon's recipe), popular spring and autumn remedy; "Anti-spasmodic Elixir," simple, reliable, always efficacious; "Camomile and Quinine Pills" for indigestion, &c., frequently preferred to Norton's; "Effervescing Depurative Saline," *fascimile* of Eno's, its 10*l*. lb., entirely soluble, keeps well; "Cyst-zymosis," certain speedy cure for gleet, &c.; "Mist. Gonorrhœa" (capivi), nauseous taste masked, unfailing remedy; "Hair-resto" (*sine* sulphur), clear, sweet, economical, confidently recommended; "Liver Pills" (vegetable), gentle action, always effect; "Lavender Water," superb fragrance, strong, equals Sainsbury's; "Occasional Pill" (for ladies), most reliable, preferred to Widow Welch's; "Essence for Deaf," simple and effectual; "Podophyllin and Taraxacum," pleasant taste, vastly superior to similar preparations; "Pile Powders and Ointment," cure and prevent hæmorrhoids; "Quinine and Iron Tonic," bright and unchangeable, resembles Pepper's; "Wine Syrup," entirely vegetable, pleasant and rapid action; "Ringworm Specific," certain rapid cure; "Tic Pills," unequalled in efficacy, many testimonials; "Chlo-dyne," inseparable, perfectly soluble, equals Brown's; "Marking Ink," indelible, no waste, creditable to sell; "Fungigating Ozonie Ribbon," cheap, sweetest, perfect disinfectant. All are guaranteed genuine formulæ, are profitable, and may be recommended with confidence. Price 1*s*. 1*d*. each, 3 for 2*s*. 25 for 1*l*., post free, with full particulars of making, &c., by T. Brooks, Chemist, Lincs. N.B.—Detailed list sent post free.

### Miscellaneous.

Violin, good tone, case, bow, and tutor, for Webb, Chemist, Calne.  
Large number of lantern slides for sale. Ap Piggott, Chemist, Huddersfield.  
Excellent bargain, clearing off; articles suitable to dealers doing with small retailers. 45*s*. Quantity of boxes, for 7 lbs. Epsom salts, &c., very cheap. 45 8*s*.  
Umbilical belt, four bathing-caps, L. & homœopathic-case; exchange for anything useful, or cash. Doubleday, Dorking.  
Thirty clean essence lemon tins, hold 1½ g each, sound; price 6*d*. each. Kemp, Hove castle.  
To Chemists Opening Business.—Good collection of stock and other labels to be sold, cheap samples post free. 50/20.  
D'Orr's No. 2 25*s*. electric light battery & lamp complete; what offer? Ellis 69 Church Street, Liverpool.



We'll-finished square parrot-cage, tinned wire, 18 by 18 by 27, quite new; cost from maker, 30s. Hunn, Chemist, Henley-on-Thames.

Aluminium keyless-watch for 17s. 6d., cost 35s.; good time-keeper. Millor, 55 Grosvenor Street, W.

Several gross Manna cake, at 10s. per gross; remnants of tobacconist's stock, very low, send for list; patents, soiled and unsoiled, very cheap, or exchange—list on application. Kendall, Blith.

26-in. pneumatic trough; Lynch's double-action tincture-press, 1 gal.; 2 doz. 20-oz. narrow-mouthed shop-rounds, gold labels; all in good condition; offers wanted. Varney, Chemist, Oxford.

Camomile flowers, opt., 5d. lb.; aniline dyes, cheap; Chilian honey, finest, 5d. lb.; aloes, Barb., 1s. 3d. lb.; pulv. rhei, E. I., opt., 1s. 9d. lb.; job lot hair-brushes, 5d. each; glycerine, 1260, opt., 5d. lb. (tins). Hicks, Chemist, Hornsey Rise, London.

One-gal. tincture-press, Maw's fig. 20; 6 sponge-racks, fig. 4; about 6 doz. opaline-pots, 1/2 oz.; "Year-book of Pharmacy," 1870 to 1878 inclusive; 12 Tomlinson's nursing-shields; what offers, for all or any part? Apply to F. E. Rookledge, Pharmaceutical Chemist, Easingwold.

A Pamphengos lantern, marvellous oil-light, equals the limelight, with four-inch condensers, only 4l. 4s.; a three-wick triplexicon, 3s. 2l. 2s.—hargains; a quantity of slides, photograph, mechanical, from 1s. each. For particulars apply to W. H., 82 Mortimer Road, Kingsland Road, London, N.

Decided Bargains.—D'O's light and power battery, only used twice, 12s. 6d., cost 25s.; Cartner's pill-coater, 12s. 6d., cost 25s.; quart tincture-press, 8s.; 4-gal. cylindrical show carboy, 12s. 6d.; 2 2-gal. pear-shape carboys, 5s. each; 1 6-gal. ditto, 12s. 6d.; 4-foot dispensing-screen, 1l.; fine Norwegian cod-liver oil, 6s. 6d. gal.; Brooks' dandelion coffee, 4s. 6d. doz.; 2s. 9d. De Sancti's pills, 1s. 6d.; pure carbolic acid, 1s. 2d. lb.; liq. ferri perchlor. fort., 6d. lb.; zinci oxidum, B.P., 8d. lb. Griffin, Chemist, Monument Road, Birmingham.

Surplus Stock.—2 gross 1 1/2-oz. stoppered lubins, 16s. 6d. gross; 3 gross rough phials, 3s. 10d. gross; 3 cases Craven's vermin-killer, 4s. 9d. each; 2 2s. 9d. Rowland's Odonto, 1s. 9d. each; 9 doz. bent feeders, red fittings, 2s. 3d. doz.; 11 doz. straight dint feeders, white fittings, 2s. 2d. doz.; 400 6-inch circular filtering-paper, lot 2s.; 300 7-inch, 1s. 9d.; 500 8-in., 3s. 4d.; 200 11-inch, 1s. 8d.; 300 12-inch, 3s.; 3 gross 1d. oval furniture-cream bottles, 2s. 3d. gross. Simcock, 17 Guildford Street, Leeds.

### WANTED.

Latin London Pharmacopoeia, Hewitt, Eastgate, Rochester.

Latest Cassell's "Family Physician." Price to Doubleday, Dorking.

Attfield's "Chemistry," 6th edition; state price—"Alpha," 169 Hemingford Road, N.

Apparatus for Limousin's cachets, in good condition. Wilson & Son, Harrogate.

Van Duger's bridal bloom. Mickle, 48 Stanley Road, Liverpool.

Nest of drawers to fit under counter. Insell, Chemist, Hanley, Staffs.

Vulcaniser, in good condition. W. Sutcliffe, Dentist, Whetley Lane, Bradford.

"Vale Mecum Dictionary," by J. Button, and Piesse's "Art of Perfumery," 43/28.

One-grain or 2-grain pill-machine. Thornley, Chemist, Manchester.

Pill-machine, 5-grain, for 36, with marble slab and rollers preferred. Lowest price to Selleck, Chemist, Bovey Tracey, Devon.

Toothbrush-case, as Maw's fig. 72; also outside lamp, in good condition. Chemist, 34 High Street, Putney.

Mixing-machine, crank handle; state lowest price, size. Bygott, Buxton Road, Huddersfield.

Good dental-chair and mahogany wall-case, 100 inches long, 100 inches high. George Best, Darlington.

Fresh peel of lemons for making tincture, or a market for the peeled fruit. F. Wheeler, Guildford.

Will buy any quantity McDougall's, Cooper's, or Little's sheep-dips, if in good condition. Robertson, Chemist, Oban.

Wall-case, all or partly shelved; ditto glass-fronted; height 90, width 33, depth 10 inches or about. R. Stanley, Southwell. Second-hand upright glass case, 2 feet 10 inches high, 2 feet wide, 6 inches across; movable; glass shelves, folding-doors; state lowest cash price. Dyson, Chemist, Bacup.

"Science Gossip," for 1886, *Pharmaceutical Journal*, Nos. 473, 487, 500, 512, 558, 559, 560, third series. Lowest price to W. Wise, Lauceston.

Attfield's "Chemistry," 9th edition, and *Pharmaceutical Journal*, bound; also 2-grain pill-machine, perfect, equal to new; "Illustrations of British Plants." A. Wrighton, Tifracomhe.

Vulcaniser, second hand, in good condition; dental lathe, sets of teeth, and other dental apparatus; "Enterprise" drug-mill and mineral-water-racks also. State prices and particulars to E. Marshall, East Molesey.

Wall, counter-front, toothbrush, and desk cases; Maw's figs. 5 or 8 scales; Maw's fig. D covered jars; spiral carboys; in exchange for double breechloader; particulars given. Howe, Chemist, Ramsey, Huntingdon.

Job lots, any kind, purchased for cash, if cheap; good formulae of hair-dyes, must stand test; copy Erasmus Wilson's or any other work on hair. "Drysaler," 304 High Street, Watford.

Two pear-shaped show-globes, York Company's, 5 gallons, with cut stoppers, full height 29 inches; dispensing counter-case, mahogany, as Maw's fig. A56, 6 feet long, 30 inches high; some 40-oz. stoppered rounds; all equal to new, and cheap. Alexander, Chemist, Edinburgh.

### Addresses and Information Wanted.

Maker of palm soap in bars, obtainable at Leeds. Harvey, Margate.

3l. given, on approval for information how to alloy cadmium metal with German silver, to be commercially and chemically successful. Address, O. Thiel, Acock's Green, near Birmingham.



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Plain Black Currant, old square	2 6	2 8
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Black Currant Cough Lozenges	3 6	3 10

(\* Ipecac. and Morph., strength as "B.P.")  
In Bottles, 1 lb., 2 lbs., 4 lbs., and 7 lbs. For Exportation, in soldered tins, of any size. From EDWARDS, London; through any Wholesale House; and from the Manufacturers.

### RANDALL & SON, Southampton,

Who will forward Samples by post on application.  
Also, BROWN COUGH LOZENGES, 2s., 2s. 2d.; 7 lbs. stamped with name free, and MUSK LOZENGES (Special), 2s. 6d., 2s. 8d.  
N.B.—Medical Lozenges of every kind,  
Including those of the Pharmacopoeia of the Hospital for Diseases of the Throat, London.

# M. A. CRAVEN & SON, WHOLESALE AND EXPORT CONFECTIONERS, MAKERS OF Medicated Lozenges, Refined Liquorice, Jujubes, and every description of Confectionery, IMPORTERS AND MANUFACTURERS OF LEMON, ORANGE, AND CITRON PEELS. EBOR CONFECTIONERY WORKS, YORK.

Lozenges of all descriptions made from Customers' private formulæ (or Ingredients), and stamped with any name or device.

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Particulars of any of the following will be sent free on application:—

1.—LONDON.—Close to a large railway junction; handsome Pharmacy for Disposal; returns £750; large double-fronted shop, and good house; price about £750; on valuation if wished.

2.—LONDON (Suburb), S.E.—Nucleus of Business to be sold at valuation of stock and fixtures, or first reasonable offer; immediate sale necessary; about £200 required.

LONDON, S.W.—Near a large park; good-class Retail and Dispensing Business, situate in main road; corner position; double-fronted attractive shop; returns last year £1,125, increasing; satisfactory reasons for disposal; price £350.

4.—LONDON, N.W.—Good locality; Retail and Dispensing Business; returns £650; large double-fronted attractive shop, and good house; price about £650.

5.—LONDON, W.—Death vacancy; Retail and Dispensing; returns have been over £500; have decreased through illness; handsome shop, very attractive; must deal with the first reasonable offer.

6.—DORSETSHIRE.—Partnership for one or two years, with success to the whole, in a very old-established concern; returns at present over £1,200; good Prescriber, and one used to a good-class business required; the investment of about £600 would suffice at present.

7.—WARWICKSHIRE.—Mixed Business (no oils or paints) of old class; returns about £1,000; profits good; handsome shop and good house; valuation of stock and fixtures only required.

8.—CORNWALL.—Good town; Retail and Dispensing; established many years; returns £900, yearly increasing; large attractive shop (central position) and good house; price about £800.

9.—NORTH OF ENGLAND.—Very old-established Mixed Business; returns £3,700; very profitable; vendor retiring from business; all accept valuation of stock and fixtures, estimated at about £1,200.

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SHEFFIELD.—Light Retail, Prescribing, and Dispensing; low rent; returns £550; price £300.

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LEICESTERSHIRE.—General Light Retail and Prescribing; unopposed; rent and taxes £25; returns average £10 a week and increasing; price £300.

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HULL.—Retail Prescribing and Dispensing in good position; returns £1,000; price £500.

MANCHESTER.—Dispensing, Prescribing, and Light Retail in good-class suburb; returns £620, and capable of considerable increase; price £450.

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**TO BE DISPOSED OF**, on account of the death of the proprietor, an old-established Chemist's Business, in a good manufacturing town near Leeds. Apply, Hirst, Brooke & Hirst, Leeds.

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**THE Advertiser**, who has a small business with post-office, requires an Assistant, as his health is precarious; one who would make himself useful, and who might succeed to the business in a few months; salary paid for progressive results. Particulars as to salary, reference, experience, &c., to "Chemicus," 105 London Wall, E.C.

**MILD CLIMATE**.—For Disposal, an old-established, profitable, retail Chemist's Business; situate Channel Islands; returns about £450; rent £35; no taxes; price £500; stock in good condition; premises can be purchased if desired; for Chemists in delicate health this is an offer rarely met with. Apply, "Chemicus," Somerset Road, Huddersfield, Yorks.

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**MR. S. SMITH**, Registered Chemist, 76 Devonshire Street, Bridgwater, takes occasional confidential charge during absence or illness.

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**AS JUNIOR ASSISTANT**, to a Surgeon or Chemist; time for study desired; can extract teeth; fair prescriber; London or Birmingham preferred; aged 22; height 5 feet 8 inches; good references. Apply, Clarke, "The Pharmacy," Harlow.

**BY** an experienced middle-aged registered Chemist and Druggist (married), out-door, as Dispenser and Stockkeeper, or Assistant in Laboratory. Nearly 2 years' experience with a West-End Pharmaceutical Chemist, M. P. S., 20 Tracy Street, Kennington Road, S.E.

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**TO MANUFACTURING CHEMISTS**, Wholesale Druggists, and Shippers.—An established House, at San Francisco, California, and well known on the Pacific Coast, is open to undertake the Agency of a first-class Firm for the sale of Caustic Soda, Glycerine, Soda Crystals, Potash, Saltpetre, Soda Ash, &c., and to receive consignments; London references. Address, H. M., 43 Conduit Street, Bond Street, London.

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**HOW** to make the Spectacle trade pay. Sell only the Luminous Chemical Crystal Glasses. Sold only by chemists; give half profit, and by our system of business prices cannot be cut. Full particulars post free. Scott & Co., 52 West Street, Sheffield. Sole agency granted for small towns.

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**CHEMISTS** desirous of competing with these should introduce their own "medicinal specialties" from recipes of acknowledged excellence.

**Rheumatic Embrocation** (Camphor and Arnica). The most elegant and efficacious liniment ever made. Costs 8d. per lb.

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N.B.—All communications strictly confidential.

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**SUPERIOR** medical bottles, plain or grad., in flats or ovals, 3 oz., 6/6; 4 oz., 6/6; 6 oz., 7/6; 8 oz., 7/6; 10 oz. and 12 oz., 8/6; 16 oz., 14/6 per gross. Blue earthenware shop jars, 4 lb., 5/6; 1 lb., 11/6; 2 lb., 14/6; 3 lb., 22/6; 4 lb., 30/6 dozen. 28 lb. tins pure extract of beef, 3/9 lb. 1 oz. upright gally-pots, 4 gross. 2 oz. futed pomade bottles, 6 gross. Bent feeding-bottles, black fittings, 28/6 gross. Indiarubber tubing, 8/6 lb. Small black indiarubber tea's, 5/6 gross. Superior white flint vials, 1 and 2 drachm, 2/4; 1/2 oz., 3/3; 1 oz., 3/9; 1 1/2 oz., 4/6; 2 oz., 5/3 gross. Pill boxes, 1 drachm, 4/4; 2 drachm, 5/5 gross. American enema, 18/6 dozen. Seidlitz demy, 7/9 ream. Verified glass measures, 1 oz., 7/2; 2 oz., 7/4; 4 oz., 11/6; 10 oz., 14/6; 20 oz., 19/6; 2 drachm, 8/6 dozen. Rain 24-pill machines, 16/6 each. French counter-scales, 2 lb., 13/6; 4 lb., 15/6; 10 lb., 22/6 pair. Best circular-jointed tooth-forceps, all kinds, 4/3 pair; nickel-plated ditto, 5/4 pair. Vaccination shields, 2/6 dozen. Good value in eigers, per 100, at 7/9, 10/6, 12/6, 13/9, 15/6, 16/9. Gold paper vials assorted sizes, for shop-bottles, &c., 2/10 dozen. French extracts 1 lb. original tins, 8/6 each. Superior thread elastic stockings, 4/6 pair. Lat's bottle caps, assorted, 10 1/2 gross. Good vial-corks, 1/4, 1/6, 1/8 per doz. Chemists' assorted coloured twine, 8/4, 10/4, 1/ per lb. Transparent glycerine soap, 6/6 lb. Soft loose capsula capsules, 8/ per 1,000; 1 vial boxes ditto, 4/9 dozen. Cork-pressers, 1/9 each. 2 oz. cough-mixture bottles, Kaye's patent, 7/6 gross. Good value in wash-leathers, per dozen, 3/6, 5/7, 7/3, 9/6. Small boxwood cork Preston salts, 15/6 gross.

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**BEST QUALITY**, Green, with Elastic Vagina Pipe and Shield, and one Rectum Pipe, in Slide Cedar Boxes.

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## INDEX TO ADVERTISEMENTS

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Turco Sponge Gloves, No. 1.. ..	(best white. Retail 6d) .. ..	4/0 per dozen pair.
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Baden Sponge Gloves, No. 1 .. ..	or Turkish (best white, extra stout quality, large) .. ..	5/0 "
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Criterion Bath Gloves .. ..	(fancy brown and white) .. ..	6/8 "
Albany Bath Gloves .. ..	(fancy white linen) .. ..	6/8 "
Princess Washing Gloves .. ..	(fancy pink and white honeycomb) .. ..	4/0 "
Princess Washing Gloves .. ..	(fancy pink and white honeycomb, large) .. ..	5/0 "

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## ARNICATED

WHITE FELT

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# HENRY YOUNG,

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Arnicated White Felt Corn Plasters.

Thin, 12 in box (round 6d. boxes) ..	2/4 per doz. boxes.
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# TREATISE ON DISPENSING

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*Reprinted from THE CHEMISTS & DRUGGISTS' DIARY, 1885.*

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The stock of the above Diary being exhausted the Treatise on the Art of Dispensing which formed its chief literary feature, has been reprinted in book form.

This reprint forms a most useful companion at the dispensing counter, and should be in the hands of every apprentice and assistant.

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AND APPLIANCES**

WILL OBLIGE by APPLYING to

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Who will also be happy to furnish a further supply, if required, for distribution.

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TAYLOR'S Condition Balls .....	3/-	1/9
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TAYLOR'S Condition Powders .....	12/6	
Ditto .....	18/-	



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TAYLOR'S Cough Powders .....	18/-	2/5
TAYLOR'S Cleansing Drinks .....	5/-	(8/- retail price)
TAYLOR'S Foot Rot Mixture .....	7/-	1/-
Ditto .....	14/-	2/-
Ditto .....	28/-	3/6

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T. TAYLOR would call especial attention of the Trade to his "Cleansing Drinks," 5s. per dozen. They are put up in neat PACKETS, and save the Chemist immense trouble. If preferred, the Drinks can be had without the word "Taylor's"—only "Cleansing Drinks"—thereby enabling the Chemist to affix his own slip label: but to secure this, when ordering ask for those with the pink label. NO RETAIL PRICE AFFORDED.

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**STRAINS, SPRAINS, RHEUMATISM, &c.,  
IN HORSES AND CATTLE.**

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GALVANISED FLUID.**

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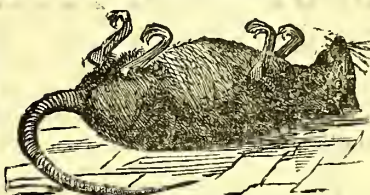
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WRAPPED NEATLY FOR THE COUNTER.

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Kills Rats, Beetles,  
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**BARBER'S VERMIN KILLER,**

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BEDFORDSHIRE  
PIG POWDERS**

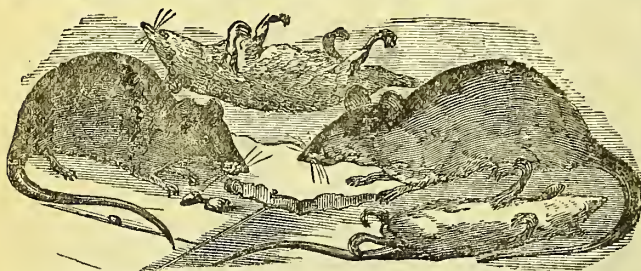
Handbills, &c., with Name and Address, by Parcel Post.  
Wholesale of BARCLAY, SANGER, EDWARDS, HOVENDEN, &c.  
Manufactory: BIGGLE-WADE, BEDS.



# HAND BILLS AND SHOW CARDS FREE.

Any Chemist, on application to  
**THOMAS KEATING**, Chemist, St. Paul's  
Churchyard, London, can have these sent  
for enclosure to his London Wholesale  
House. The Bills are plain on one  
side, printed on four different colours  
large enough to wrap a 6 oz. bottle.  
Two or three weeks' notice is required.  
Please send two labels that printer may  
add name and address correctly.

## BATTLE'S VERMIN KILLER. { Mice eat it readily, and Die on the spot.



Has an immense Sale, and wherever introduced never fails to give satisfaction. Mice appear attracted to it as by magic, eat it readily, tumble over and die on the spot. Rats usually die in their runs. Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

### TESTIMONIALS.—Thousands might be published

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy to-day he called in to say that he had found fifteen dead mice, and had ordered part of a packet. From Mr. EDWARD STURDY, Flemington Mills I duly received by post the Packet of your VERMIN KILLER, and found as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets. Leeds, November 6, 1885.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS. THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

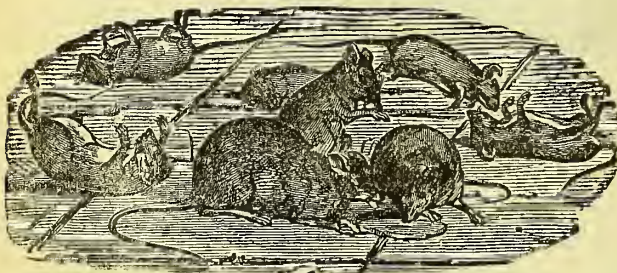
SOLE PROPRIETOR:

**Mr. J. R. BATTLE**, Chemist, Lincoln, England.

No Chemist or Storekeeper should be without a supply.

## SANFORD'S RAT POISON

Is admitted by Hundreds that have used it to be the best Preparation known. 120 rats were found dead by one dressing. Has never been known to fail.



SANFORD & SON, having had 28 Years of Practical Experience in Poisoning Rats, Mice, &c., can with confidence recommend it as the best Preparation known.

Read the following Testimonials, which have been selected from many that have been received:—

SANFORD'S RAT POISON.—It is undoubtedly the best preparation known. It does not require spreading on bread, as is usual. Rats eat it readily and are found dead.

Mr. SANFORD, Sir.—Your Rat Poison answers well. I found 54 rats killed by it.—F. FOWLER, Farmer, Henlow.

Mr. SANFORD, Sir.—I find your Rat Poison very effective: it killed 130 rats in my wheat stacks.—J. U. PAINE, Farmer, Caxton.

Mr. SANFORD, Sir.—Your Rat Poison is the best I ever used: it answered well.—J. LONO, Farmer, Henlow.

Sold at 6d., 1s., 2s., and 3s. per Box, with Directions for use.

A TRIAL SOLICITED.

**SANFORD'S MICE POISON**, For Houses, Buildings, Corn Stacks, &c. Cannot be excelled. In Packets, 3d., 6d., and 1s. each, of Chemists or of the Proprietors.

**SANFORD & SON, SANDY, BEDS.**  
LIBERAL TERMS TO CHEMISTS.

Wholesale of **BARCLAY & SON, SANGER & SON, NEWBERRY & SONS**, and others.

By Permission of the Hon. Board of Customs, Free of Duty.

## GROUND LEAF TOBACCO OR SNUFF

Greatly Reduced in Price for Agricultural Uses.

As the basis for making **FLY POWDER** it is invaluable. For **DUSTING OVER CATTLE**, to destroy Lice or Prevent Fly, it is the **SAFEST**, at the same time the **MOST CONVENIENT** and **CHEAPEST** article for the purpose.

The Trade supplied direct from the Manufactory.

Price, in bags containing 1 cwt., 30/-, or in lots of 5 cwt. and upwards, £25 per ton. Tins, 1/- and 2/- each (Retail), with full directions.

Post samples sent on application free of cost.

**CORRY, SOPER, FOWLER & CO. (LIM.),**

Bonded Tobacco Stores, SHAD THAMES, S.E.

OFFICES 8 FINSBURY STREET, LONDON, E.C.

ESTABLISHED 60 YEARS.

Exhibitions—1851, 1862; Paris, 1867, 1878.

## LEATHART'S EXHIBITION HAIR DYES

To Retail at 1/-, 2/6, 3/6 and 5/6. See Price List.

To Dye instantaneous, Black, Dark Brown, Ordinary Brown, Light Brown, and Special Brown.

## LEATHART'S COLORIFIC.

A Stain in one preparation; perfect, light, and ordinary browns.

To Retail at 3/6; 24/- per dozen.

## EXHIBITION DYE IN BULK.

2/6, 5/-, 10/-, £1. Five Colours.

ONE PREPARATION IN BULK.

## MALACCA JUICE.

Winchester (4 pints), 14/- Sample Bottle, carriage free, 1/6.

AN ORIGINAL PREPARATION. QUICK IN ACTION.

179 Ladbroke Grove Road, Notting Hill, LONDON, W.

N.B.—Price List will be forwarded.



# THIRTY-EIGHT YEARS' REPUTATION.

## CANNOT BE EXCELLED.

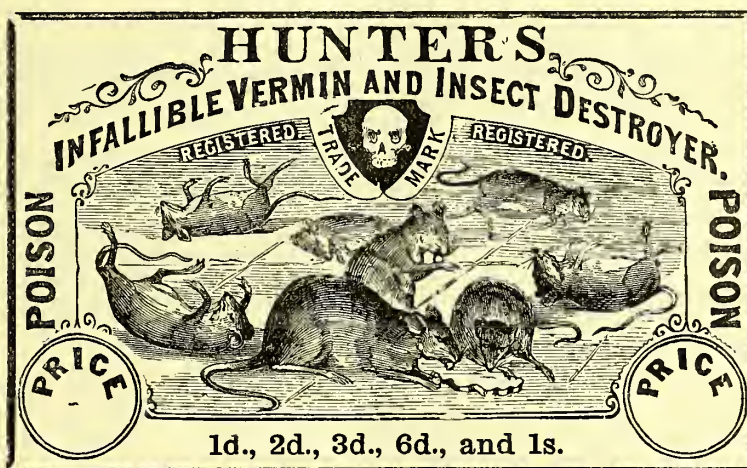
### NEATLY AND CAREFULLY PUT UP.

# KILLS RATS & MICE ON THE SPOT.

#### TESTIMONIALS.

From Mr. James Froud, Chemist, Dorchester:—"Your poison succeeds to admiration. It is as effective as an infernal machine."

From Mr. Smith, Chemist, Glasgow:—"I have not kept any other 'Vermin Killer' than yours for the last four years. It is the best I ever sold."



1d., 2d., 3d., 6d., and 1s.

#### TESTIMONIALS.

From Messrs. P. Smith & Co., Chemists, Runcorn, Oct., 1880:—"In our opinion your 'Destroyer' is the best extant."

From Mr. James Thompson, Low Hesket, near Carlisle, to Mr. R. T. Pattinson, Chemist, Carlisle:—"Sir,—You can with confidence recommend 'Hunter's Vermin Destroyer.' It is the best thing I ever used, having often cleared stack-yards with it of both rats and mice in a day or two."

#### LATEST TESTIMONY.

The Royal Canine Surgery,  
55 South Molton Street, London, W.,  
Dec. 6, 1884.

Mr Hunter, Dewsbury,

Dear Sir—I have tried several advertised Rat Poisons without getting a good one. Having seen your advertisement I am wishful to give yours a trial, and shall be pleased if you will send me a 1s. packet. Stamps enclosed.

Yours faithfully,

C. ROTHERHAM.

#### RESULT OF TRIAL.

55 South Molton Street, London, W.,  
January 12 1885

Mr. Hunter, Dewsbury,

Dear Sir,—I have great pleasure in telling you that your Vermin Destroyer has proved most effective in reducing the number of Rats about my premises, and if you like to publish my testimony of its value you are welcome to do so.

Yours faithfully,

C. ROTHERHAM,  
Veterinary Surgeon by Special Appointment  
to H.M. the Queen.

A RESPECTABLE AND SATISFACTORY ARTICLE SUPPLIED TO  
RETAILERS, ON THE BEST TERMS, BY ALL THE  
**WHOLESALE HOUSES.**

PRINCIPAL WHOLESALE DEPÔT—  
**DEWSBURY, ENGLAND.**

ESTABLISHED 1846.



# HORSE, CATTLE, AND SHEEP MEDICINES



By Special Warrant,  
Dated 27th December, 1865.

BY ROYAL APPOINTMENT.

## DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE



By Special Warrant,  
Dated 10th February, 1866.

## "ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs.

Patronised for over 50 years by the nobility and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 MEDICINE CHEST contains the following matchless remedies:—

"CHEMICAL EXTRACT," for all External Injuries, and Ewes Lambing.

"GASEOUS FLUID," for Colic, Scour, or Diarrhoea, and Debility.

"RED DRENCH," for Cleansing Cows and Ewes, and for Inflammation.

"RED PASTE BALLS," for Mares after Foaling, and Conditioning Horses.

"BRONCHOLINE," for Husk or Hoose in Sheep, Lambs, and Calves.

"GASEODYNE," for Heaving and Paining, "CARMINATIVE CHALK," &c.

Price of Chest No. 2, with Guide to Farriery, £2 16s. 6d. No. 1 Complete Medicine Chest, in Polished Case, £6 6s. Horsekeeper's Chest, No. 4, £2 17s. 6d.

CARRIAGE PAID TO ALL PARTS OF THE BRITISH ISLES.

Admirably adapted for all ordinary ailments among Stock, and each preparation can be had separately. Full and easy directions enclosed.

Awarded "Certificate of Merit" by the National Agricultural Society of Victoria, Australia, 1871; President's Medal, Spalding, 1872; Silver Medal, Manchester and Salford Show, 1874; Silver Medal, Preston, 1875; Silver Medal, Stamford, 1875; Silver Medal, Crewe, 1875; Special Prize National Agricultural Society of Victoria, Australia, 1875; Medal, Chester, 1876; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, Newcastle-on-Tyne, 1877; Silver Medal, Knutsford, 1878; Medal, North Berwick, 1878; Medal, Dairy Show, London, 1878; Silver Medal, Derby, 1879; Silver Medal, Wellington, 1879; Medal, Benthall, 1880; Medal, Melbourne Exhibition, 1880; Silver Medal, Stourbridge, 1881; Silver Medal, Doncaster, 1882; Gold Medal, Christchurch, New Zealand, 1882; Silver Medal, Canterbury, 1882; Silver Medal, Kettering, 1883; and Medal, Amsterdam 1884.

CAUTION.—Beware of Imitations, and see that the name of DAY, SON & HEWITT is on all Bottles and Packets.

Prepared only by DAY, SON & HEWITT, 22 DORSET STREET, BAKER STREET, LONDON, W.

And sold by Messrs. Burgoyne, Burdidge & Co., Barclay & Sons, W. Edwards, Newbery & Sons, Sanger & Sons, Hovenden & Sons, and all Wholesale Druggists, in London; Hood & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin and Auckland; Fairthorne & Co., Launceston.

## HORSES.—LIEUT. JAMES' BLISTER

(Manufactured by R. J. JAMES, the Grandson of the Inventor).

THIS CELEBRATED BLISTER IS NOW OFFERED TO THE TRADE AT THE FOLLOWING REDUCED PRICES:—  
 1 oz. pots from 14/- per doz. to 12/6 per doz. | 1 lb. pots from £4 4 0 per doz. to £4 0 0  
 2 " " £1 5 6 " £1 3 0 " | 1 " " 7 16 0 " 7 10 0  
 4 " " 2 8 0 " 2 4 0 "



Observe the Trade Mark.—A Horse's Head on the top of each Pot, and the signature, R. J. James.

Wholesale Agents, BUTLER & CRISPE, 4 Cheapside; NEWBURY, 37 Newgate Street; MAW, SON & THOMPSON, 11 Aldersgate Street; HAYES & CO., Dublin; GOULDING, Cork; FOGGITT, Thirsk; and SANG & BARKER, Edinburgh. Agents for the Colonies required. Apply, with reference, to R. J. JAMES, South Retford, Notts.

JAMES v. JAMES.—LORD ROMILLY, the Master of the Rolls, on February 23, 1872, declared "that I had an equal right with other members of the Inventor's family possessing the receipt to make and sell this Blister."—R. J. JAMES.

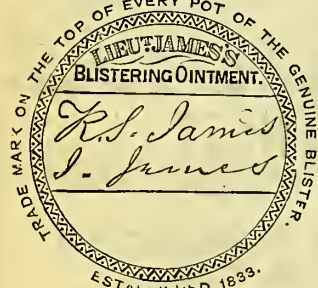
ESTABLISHED 1833.

## HORSES.—LIEUT. JAMES'S BLISTER.

CAUTION.

The annexed Label is at the top of every Pot of the ORIGINAL and only GENUINE BLISTER.

The Messrs. Barclay & Sons, 95 Farringdon Street, London, and Messrs. Raimes & Co., Edinburgh, Liverpool, and York, are now and have been Agents 49 years.



AGENTS:—Sutton & Co., 10 Bow Churchyard; W. Edwards & Son, 167 Queen Victoria Street; Newbery & Son, 37 Newgate Street; Evans, Lescher & Evans, Bartholomew Close; Burgoyne, Burdidge & Co., 16 Coleman Street; Lynch & Co., 171A Aldersgate Street; Southall Brothers and Barclays, Birmingham; R. Hovenden & Sons, 93 & 95 City Road, Finsbury; Sanger & Son, 150 Oxford Street; Millard & Sons, 40 Charterhouse Square; Corry & Soper, Shad Thames; A. A. Campbell, Leadenhall Street, London; Woolley, Sons & Co., 59 Market Street, Manchester; Apothecaries Company, Virginia Street, Glasgow; Boileau & Co., Bride Street, Dublin; McMaster & Co., 121 & 122 Capel Street, Dublin; Clarke & McMullen, Victoria Street, Belfast; D. Galbraith, Londonderry; M. C. Delacre, Pharmacie Anglaise, Bruxelles. And by all Chemists, in Pots, 1/6, 2/6, 5/6, 9/6, and 16/.

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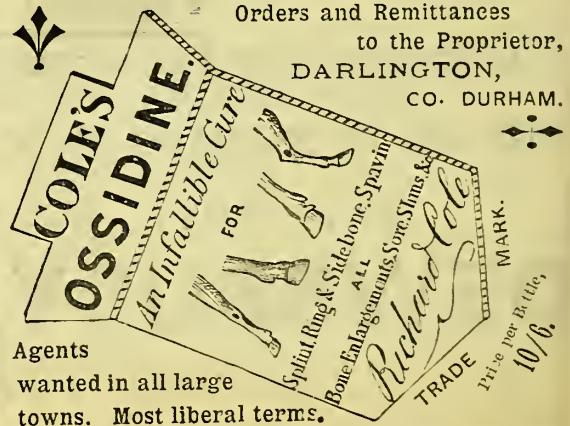
W. H. JAMES, Sole Manufacturer, STAMFORD, FARRINGDON, BERKS. Advertiser in "Bel's Life" 49 years. Beware of Spurious Imitations.

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SUITABLE FOR SHEEP OR CATTLE OINTMENT, 30s., 33s., and 36s. per cwt.

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Orders and Remittances to the Proprietor, DARLINGTON, CO. DURHAM.



Agents wanted in all large towns. Most liberal terms.



# A VERY PROFITABLE AGENCY.

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The Largest Manufacturers of Cattle Condiments in the United Kingdom, beg to submit their Wholesale Price List, and to solicit a Trial Order.

### GREEN'S THRIVING POWDER,

For COWS, SHEEP, PIGS, &c.

4-oz. Packets .. ..	1d. .. ..	24s. per Cwt.
1-lb. " .. ..	3d. .. ..	21s. "
2-lb. " .. ..	6d. .. ..	" "
4-lb. " .. ..	1s. .. ..	" "
7-lb. Linen Bags .. ..	1s. 6d. .. ..	19s. "
14-lb. Canvas Bags .. ..	3s. .. ..	" "
28-lb. " .. ..	6s. .. ..	" "
56-lb. " .. ..	12s. .. ..	" "
112-lb. " .. ..	24s. .. ..	" "

### GREEN'S CONDIMENT FOR HORSES.

Same Sizes, Prices, and Terms as Thriving Powder.

### GREEN'S CONCENTRATED CONDITION POWDERS FOR HORSES.

1-lb. Canisters .. ..	1s. each .. ..	9s. per doz.
6-lb. " .. ..	5s. " .. ..	45s. "
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### GREEN'S PREPARED DOG MEAL.

1-lb. Packets .. ..	3d. each .. ..	21s. per cwt.
7-lb. Linen Bags .. ..	1s. 3d. " .. ..	17s. "
14-lb. Canvas Bags .. ..	2s. 6d. " .. ..	" "
28-lb. " .. ..	5s. " .. ..	" "
56-lb. " .. ..	9s. 6d. " .. ..	16s. "
112-lb. " .. ..	18s. " .. ..	15s. "

### GREEN'S POULTRY & GAME FOOD.

Same Sizes and Prices as Prepared Dog Meal.

### GREEN'S MILK POWDER.

A highly Concentrated Food, and the best substitute for the Natural Milk, for REARING CALVES and other YOUNG STOCK.

7-lb. Linen Bags .. ..	1s. 6d. .. ..	19s. per cwt.
14-lb. " .. ..	3s. .. ..	" "
28-lb. " .. ..	5s. 9d. .. ..	18s. "
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### GREEN'S POULTRY & GAME SPICE.

In 4-oz. Penny Packets only. 24s. per cwt.

### GREEN'S CONCENTRATED POULTRY AND GAME SPICE.

1-lb. Canisters, 1s. each, 9s. per doz.

### GREEN'S AROMATIC SPICE FOR HAY.

In 7-lb., 14-lb., 28-lb., 56-lb., and 112-lb. Bags, 21s. per cwt.  
Retail Price, 23s. per cwt.

### PURE CRUSHED LINSEED.

17s. per cwt., net at Mills.

### GROUND SPICES, SEEDS, &c.

Samples and Prices on application.

A Sample Case, containing an assortment of 2 cwt., sent Carriage Paid to any Railway Station in Great Britain, on receipt of P.O.O. or Cheque for 42s.

## YIELDS 25 PER CENT. PROFIT.



**JAMES EPPS & CO.'S**

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**HOMOEOPATHIC MEDICINES**

Are supplied direct or through the PATENT MEDICINE HOUSES.

Small quantities are conveniently sent by PARCEL POST.

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**48 THREADNEEDLE STREET.****A PROFITABLE AGENCY.***We are willing to post the district, distribute handbills, and send the first parcel on sale or return*  
**TERMS ON APPLICATION.****STURTON'S UNIVERSAL PIG POWDERS.**

Sold in Boxes, 6d. and 1s. each. Once used, customers ask for them again.

**STURTON'S****ROYAL BUTTER POWDER, CREAM AND MILK PRESERVER**

Put up in Boxes, 6d. and 1s. each. Have had many testimonials to its efficacy.

**STURTON & SONS, Manufacturing Chemists, PETERBOROUGH**

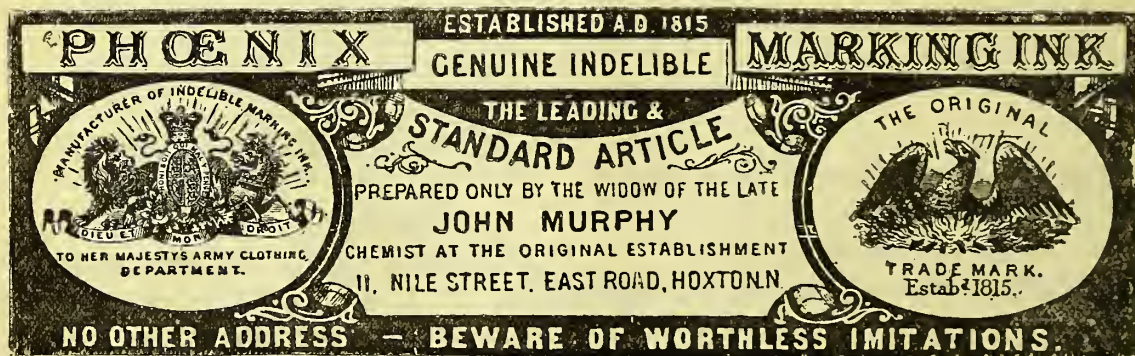
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Sent out in 2-lb. or 4lb. Bottles, Bottles Free; or in Tins, from 10 lb. upwards.

**LIME JUICE TABLETS.****PURE MALT TABLETS****ACID DROPS, AND BEST QUALITY BOILED SUGARS OF EVERY KIND.****GIBSON'S ORIGINAL CHLORODYNE LOZENGES.****PENNY SUGAR WORM CAKES,** suitable for either *children or adults*. Have an immense sale keep in any climate, and please everybody. Manufactured by**ROBERT GIBSON, Carlton Works, Hulme, Manchester, and 1 Australian Avenue, London**

Price Lists sent on application. Our Goods can be bought through any Wholesale or Export House in London. Indents should be marked "Gibson's".



BY HER MAJESTY'S ROYAL LETTERS PATENT

# PROFESSOR TUSON'S DISINFECTANTS, DEODORISERS & ANTISEPTICS. LIQUID AND POWDER.

These Preparations are the Invention of Prof. TUSON, of the Chemical Laboratory, Royal Veterinary College, Camden Town.

THE LIQUID is a solution of one of the most powerful non-volatile disinfectants impregnated with the BEST gaseous disinfectant.

THE POWDER, when exposed to the air, but more rapidly when damped with water, or when applied to litter, manure, or other moist substances, evolves the same gaseous disinfectant as the liquid.

Both preparations fix ammonia, prevent putrefaction and the spread of infectious diseases, DESTROY (not merely mask) bad smells, and LEAVE NO SMELL of their own. These combined qualities render them superior to, and unlike, every other disinfectant hitherto invented.

THEY WILL BE FOUND INVALUABLE in Houses infected with Cholera, Fever, Small-pox, Measles, &c.; in Hospitals, Dissecting Rooms, Ships, Factories, Stables, Cow-sheds, Dairies, Larders, Piggeries, Slaughter-houses, Kennels, Urinals, Privies, Cesspools, Water-closets, Sewers, Drains, Manure Heaps, &c.

Note.—For use in Water-Closets, Sinks, Drains, and the like, preference should be given to the Liquid, as the choking of soil-pipes, &c., by solid Disinfectants is thereby entirely avoided.

**SOLD BY ALL CHEMISTS.**

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SOLE MANUFACTURERS:—

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YORK STREET, WALWORTH, LONDON, S.E.

ESTABLISHED OVER 40 YEARS.

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CITRATE of MAGNESIA,  
MERCURIALS of every kind,  
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COLOURS of every descrip-  
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(to this department W. B. &  
Co. have given special atten-  
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of the trade);

GLACIAL ACETIC ACID,

CONFECTIONERY  
FLAVOURS of every kind,  
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FRUIT ESSENCES.  
SUPER ESSENCE of LEMON  
only,  
MINERAL ACIDS of every  
kind,  
TARTARIC, CITRIC, and  
other ACIDS (not makers of  
these, but in a position to offer),  
BORACIC ACID, &c.

SOLE PROPRIETORS OF

**MARIGOLDINE,  
NEW COLOUR FOR BUTTER, CHEESE, &c.**



After a lengthened investigation, the Proprietors are enabled to offer this novel preparation, representing the rich colour of the Marsh Marigold, in a highly concentrated form. Being a Vegetable Extract, it will be found to impart to Butter a beautiful golden colour, free from taste, possessing its natural odour, and as pure as the herbage on which the animal feeds.

It is well known that in the Spring or Summer the rich colour of Butter is derivable from the Marsh Marigold and Ranunculus (Buttercups) of our pastures, and it has been the aim of the Proprietors to produce an article that will enable the dairymen to obtain uniformly the same results at all times of the year in the most agreeable form; and it is confidently believed that it will be found superior to every preparation hitherto sold for the purpose. Its perfect compatibility with oil and grease of every description (not watery compounds) makes it useful for many other purposes in which it is desired to obtain a rich and delicate golden tint.

Sold by Chemists, &c., and Wholesale Houses.

W. B. & Co. inquiries, and will be happy to furnish Samples and Prices at all times.

## W. KEMP & SON, HORNCastle.

### PURE CRUSHED LINSEED,

CONTAINING ALL THE OIL. A strictly pure article, all other seeds, dirt, &c., being entirely removed. It is lightly crushed from a special kind of large bold seed, which gives a larger proportion of meal to husk than the ordinary commercial Linseeds. Price 18/6 per cwt., bag free. Special quotations for 5 cwt. and upwards.

NOTE.—This quality can be obtained from Messrs. Barclay & Sons, 95 Farringdon St., London, in 1-cut. bags at above price; smaller lots 20/cwt.

### CRUSHED LINSEED No. 2,

Contains all the Oil, and is crushed from sound good Linseed, 17/6 per cwt., bags free.

### CRUSHED LINSEED No. 3,

Contains all the Oil, and is crushed from sound good Linseed, 16/6 per cwt., bags free.

### CRUSHED SICILIAN LINSEED,

The best for feeding purposes; merely require scalding to make a stiff jelly, and when introduced at once creates a large demand; bags free.

### PURE LINSEED MEAL,

WITHOUT OIL. Best quality only, 11/6 cwt., bags free.

All ground in our own mills, and always sent out freshly crushed.

Special Quotations for Quantity.

Above can be had with the Husk wholly or partially sifted out at an advanced price. Correspondence on this subject is invited.

Applications for Samples solicited.

W. KEMP & SON, Seed Crushers, HORNCastle.

## PRICE'S PATENT CANDLE COMPANY, LIMITED

LONDON AND

LIVERPOOL



**PRICE'S GLYCERINE**

HAS RECEIVED THE HIGHEST AWARDS AT ALL THE GREAT EXHIBITIONS.



**HONOURABLE MENTION,**  
International Food Exhibition, Agricultural Hall, London, October, 1880.

# HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER

(Guaranteed Pure and Free from Capsicum).

**Trade Price, 5s. per lb.; 12 lbs. and upwards, 4s. 6d.**

Highly adapted for the manufacture of *Transparent Aërated Waters*, and for all *Dietetic, Medicinal, and Pharmaceutical purposes*.

Medical and other Opinions on

HAY'S Soluble Essence of Ginger.

"Singularly free from resin."—*The Lancet*.

"It should entirely supersede the official preparation of the British Pharmacopoeia."—*Medical Press*.

"This Essence is of a very delicate and beautiful appearance, the aroma is fine and powerful, and its strength is very great indeed. The flavour is really exquisite, and it concentrates in quite a remarkable degree the very best aromatic qualities of ginger."—*Drinks*, London, Sept. 1, 1884.

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"An excellent effervescing drink."—*The Lancet*.

"Preferable to some wines we have tasted under the name of champagne."—*Medical Press*.



"An excellent and most agreeable beverage."—*The Lancet*.

"One of the most delicate and wholesome drinks in the market."—*Medical Press*.

"The FINE AROMA OF GINGER which Mr. Hay has caught with remarkable success is an excellent SUBSTITUTE FOR ALCOHOL, as it gives what old port wine drinkers used to call 'BODY,' and to many people, besides professed teetotallers, an occasional change at least from the ROYAL FRENCH BEVERAGE to its less costly, but equally sparkling and MORE REFRESHING ENGLISH RIVAL, is a welcome treat."—*The Chemist and Druggist*.

HAY'S Ginger Ale.

"It pours out with as fine a 'head' as any glass of ale, and possesses all the fine aromatic flavour of the pure ginger. It is a beverage which is sure to win favour wherever introduced."—*The Chemist and Druggist*.

## THE COMPOUND FORTIFIED ESSENCE FINEST GINGER ALE.

Specially adapted for the Manufacture of the

This Essence, which is an addition of Vanilla, Lemon, and other flavours to the above, is strongly recommended for the manufacture of the finest Ginger Beer and Ginger Ale. It imparts, with the exquisite Ginger Aroma of the above-mentioned Essence, a peculiarly fine fruity flavour combined with the fullest amount of fragrance and pungency.

**Trade Price, 5s. 6d. per lb.; 12 lbs. and upwards, 5s.**

## HAY'S GINGER CHAMPAGNE ESSENCE FOR THE MANUFACTURE OF GINGER CHAMPAGNE.

This Essence is a combination of the Finest Flavours, and imparts with the Ginger, a most exquisite Aroma.

**Trade Price, 8s. per lb.; 12 lbs. and upwards, 7s. 6d.**

## HAY'S GINGER ALE ESSENCE, HIGHLY CONCENTRATED.

This Essence is a complete Bouquet of the Finest Ginger, Lemon, and other flavours in a highly concentrated state. Ginger Beer and Ginger Ale made with this Essence will possess an amount of Aroma, Flavour, and Quality that have hitherto been without precedent, and that will be sure to command a large sale.

THE COST IN MANUFACTURE IS ABOUT ONE FARTHING PER DOZEN BOTTLES.

**Trade Price, 9s. per lb.; 12 lbs. and upwards, 8s. 6d.**

## HAY'S GINGER ALE EXTRACT

SUPPLIES PUNGENCY, AROMA, COLOURING, AND FLAVOURING.

This Extract is strongly recommended for the manufacture of Ginger Ale, to which it imparts an unusually Fine Flavour and Great Brilliancy, at a cost of a little under 1d. per dozen bottles.

**Trade Price, 4s. 6d. per lb.; 12 lbs. and upwards, 4s.**

PREPARED BY

**W. HAY, Manufacturing Chemist, BEVERLEY ROAD, HULL.**

Agents—Messrs. HEARON, SQUIRE & FRANCIS, Wholesale Druggists,  
5 COLEMAN STREET, LONDON, E.C.

W. HAY CAUTIONS THE TRADE against the use of those spurious so-called SOLUBLE ESSENCES which, besides having NO GINGER AROMA, are FLAVOURLESS, RANK, and DISAGREEABLE, and are little more than TINCTURES OF CAPSICUM.

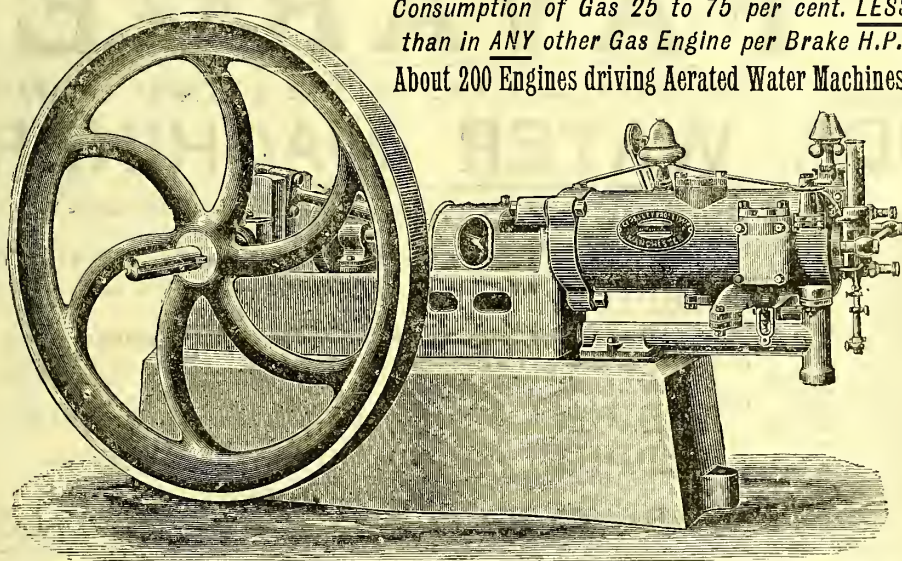


# THE "OTTO" GAS ENGINE.

## OVER 15,000 IN USE.

## 14 GOLD MEDALS. 16 SILVER MEDALS.

*Consumption of Gas 25 to 75 per cent. LESS  
than in ANY other Gas Engine per Brake H.P.  
About 200 Engines driving Aerated Water Machines.*



### CROSSLEY'S NEW VERTICAL "OTTO" ENGINES.

*Requiring very little ground space.*

### CROSSLEY'S PATENT SELF STARTER.

*The Safest, Simplest, and Best.*

### CROSSLEY'S PATENT TWIN ENGINES.

*Impulse every revolution. The steadiest running Gas Engine yet made.*

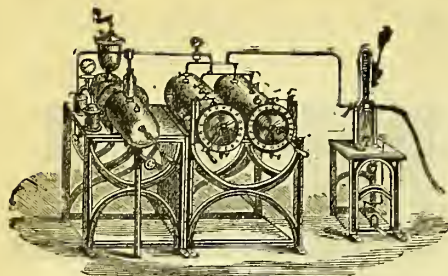
*THE ONLY GAS ENGINE WHICH RECEIVED A GOLD MEDAL AT THE PARIS ELECTRICAL EXHIBITION.*

## CROSSLEY BROS., LIM., OPENSHAW, MANCHESTER

London Office: 24 POULTRY, E.C.

Glasgow Office: 19 RENFIELD STREET.





SODA WATER MACHINE COMPLETE, WITH RACK.

# SODA WATER MACHINERY, ALL KINDS. PATENT STOPPERED BOTTLES ALL KINDS.

## ICE-MAKING MACHINES,

AND ALL REQUIREMENTS OF EITHER TRADE  
SEPARATE CATALOGUES, POST FREE.

BEFORE BUYING, SEND FOR CATALOGUE TO  
**DAVENPORT & CO., 99<sup>N</sup> High Holborn, LONDON.**

ALSO AGENTS FOR

HAYWARD TYLER &amp; CO.'S MACHINERY.

THOMPSON'S PATENT BOTTLES.

CHEAVIN'S AND OTHER FILTERS.

WILKINSON'S SCREW PATENT BEER BOTTLES.

CROSSLEY'S AND "BISSCHOP" GAS ENGINES.

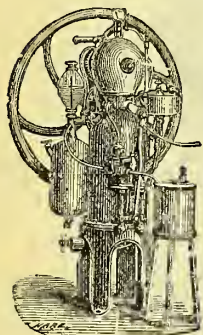
# H. FAVARGER.

GOLD MEDAL]

[MONDOLLOT'S PATENT

[PARIS, 1878.

## SODA WATER MACHINERY.



The "MEDIUM" is guaranteed to make extra sharp Soda Water, and the finest Lemonade, Ginger Beer, & nger Ale, &c.  
The "MEDIUM" requires no skilled labour, and can be worked by hand or steam power.  
The "MEDIUM" saves 50 per cent. of materials over any other hand machine, and requires less power.  
The "MEDIUM" will last for years without repairs beyond the renewal of washers.  
The "MEDIUM" requires no gasometer, and occupies but a quarter of the room of an ordinary machine.  
The "MEDIUM" is automatic in all its work, and merely requires the wheel to be turned.  
The "MEDIUM" is of the finest workmanship, and is in use all over the world.

Apply for illustrated Catalogue to

H. FAVARGER, 75<sup>C</sup> TURNMILL STREET, LONDON.

# SODA WATER & ICE MAKING MACHINERY

AND ALL APPLIANCES FOR THE TRADE

BY

## BARNETT & FOSTER

INVENTORS &amp; MANUFACTURERS.

## NIAGARA WORKS, 23<sup>T</sup> EAGLE WHARF ROAD, LONDON, E.

SEND FOR CATALOGUE — FORWARDED FREE.

The Catalogue above referred to comprises every requirement for the Chemist in the way of Manufacturing and Dispensing of all kinds of Aerated Waters. 3 Gold, 2 Silver, and 2 Bronze Medals, International Health Exhibition, London, 1884.



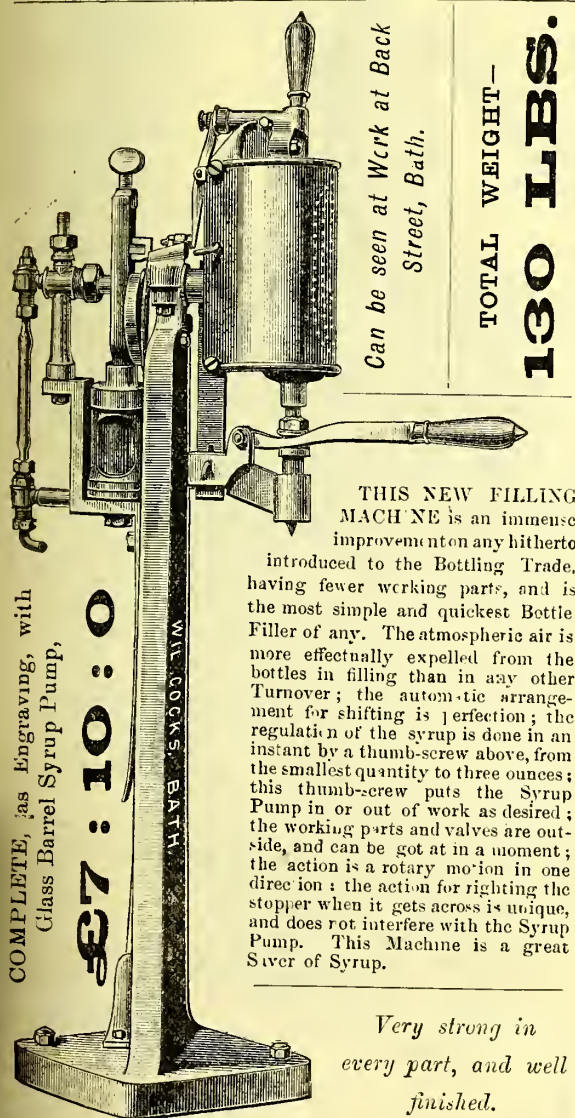
# WILCOCKS'

NEW REGISTERED DESIGN AND PATENT

APPLIED TO

## TURNOVER FILLING MACHINE

FOR FILLING INTERNAL STOPPER BOTTLES.



THIS NEW FILLING MACHINE is an immense improvement on any hitherto introduced to the Bottling Trade, having fewer working parts, and is the most simple and quickest Bottle Filler of any. The atmospheric air is more effectually expelled from the bottles in filling than in any other Turnover; the automatic arrangement for shifting is perfection; the regulation of the syrup is done in an instant by a thumb-screw above, from the smallest quantity to three ounces; this thumb-screw puts the Syrup Pump in or out of work as desired; the working parts and valves are outside, and can be got at in a moment; the action is a rotary motion in one direction: the action for righting the stopper when it gets across is unique, and does not interfere with the Syrup Pump. This Machine is a great Saver of Syrup.

*Very strong in every part, and well finished.*

We have laid down Special Additional New High-Class Machinery to meet the increased demand for our Goods

# N. G. WILCOCKS,

SOLE MAKER AND VENDOR,

**BATH, SOMERSET.**

# N. G. WILCOCKS, BATH.

## AERATED WATER MACHINERY.

### READ THE SUBJOINED TESTIMONIALS.

Battersea, London, 4th February, 1885.

DEAR SIR,—I have much pleasure in sending you a testimonial as to your make "Favourite" Soda Water Machine, as supplied to my order about 2½ years ago. It has given me every satisfaction, and has always done its work well; has cost nothing for repairs, because none were required. The waters are highly gaseous, and the machine produces goods in the highest state of perfection. Your Dial Pressure Gauge does you great credit, as it does not get out of order. Being an old-established Mineral Water Manufacturer, I offer my opinion with some confidence.

You may publish this if you think fit.

Yours truly, T. HICKS.

To Mr. WILCOCKS, Bath.

Aerated Water Works, Howden, Yorks.,  
February 10th, 1885.

Mr. N. G. WILCOCKS, Engineer, Back Street, Bath.

DEAR SIR,—I have pleasure in hearing testimony to the excellent workmanship of your machinery. Four years since I had an Aerating Machine and "Eclipse" Bottler, and also a small Engine and Boiler, all of which continue to work to my satisfaction. I may add that, with the exception of the Engine and Boiler, we put the machinery up ourselves.

You are at liberty to make what use you like of this.

Yours truly, ROBT. BRIGGS.

Princes End, Tipton, February, 1885.

To Mr. N. G. WILCOCKS, Bath.

From BAYLIS, THOMPSON &amp; CO., Aerated Water Manufacturers.

DEAR SIR,—We have great pleasure in stating that the Aerated Water Machinery you supplied us with two years ago continues to work well, and gives us every satisfaction.

Yours truly, BAYLIS, THOMPSON &amp; CO.

January 24th, 1885.

From COPELAND &amp; TURNER, Portland Mineral Water Works, 9 Upper Market Square, Hanley.

To Mr. WILCOCKS, Bath.

DEAR SIR,—I have much pleasure in testifying to the excellence of the Machinery supplied to us by you. We have now had it in use for two years, and it has given entire satisfaction.

Yours respectfully, COPELAND & TURNER.  
J. COPELAND.Range Road, Denton, Grave end, Kent,  
February 5th, 1885.

DEAR SIR,—Having purchased of you a Soda Water Machine and Engine and boiler, I am happy to say they have given me great satisfaction, and are all I could have desired, and it has been greatly approved of by my many friends. You may print this if you please.

Yours respectfully,

STEPHEN ALLEN.

Mr. WILCOCKS, Engineer, Bath.

Soothsea Steam Mineral Water Works,  
Middle Street, Jaquary 30th, 1885.

To Mr. WILCOCKS, Bath.

SIR,—Your Turnover Filling Machine is still working admirably, and appears as good now as when I first had it. It is really the best filling machine for quickness and ease of working I ever had.

Yours truly,

T. MARTIN.

Holland Street, Brixton, London, S.W.

From ROE &amp; MERCHANT, Aerated Water Manufacturers.

To Mr. WILCOCKS, Engineer, Back Street, Bath.

DEAR SIR,—Your favour to hand. We are pleased to say that the large Double Soda Water Machine that we purchased from you three years ago has been in constant work ever since. It has given us every satisfaction. In fact, we have never had the slightest trouble with it, and it turns out a first-class Aerated Water.

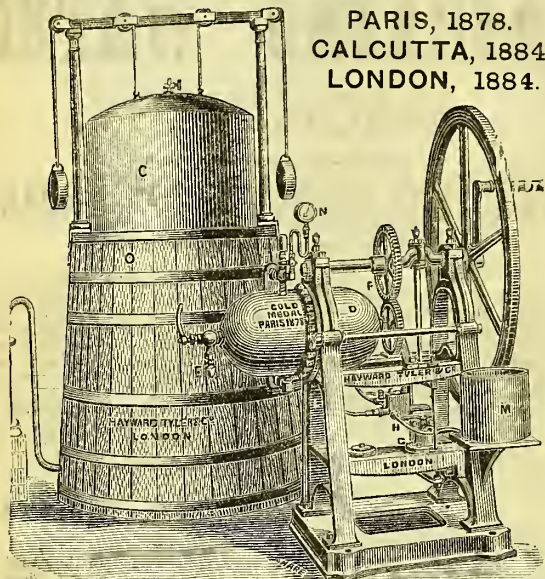
We remain, dear Sir, yours truly.

ROE &amp; MERCHANT.

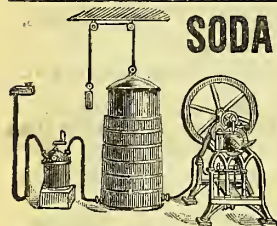


# 3 GOLD MEDALS AWARDED FOR SODA WATER MACHINERY. HAYWARD TYLER & CO.,

PARIS, 1878.  
CALCUTTA, 1884.  
LONDON, 1884.



84, 85 WHITECROSS STREET, LONDON.



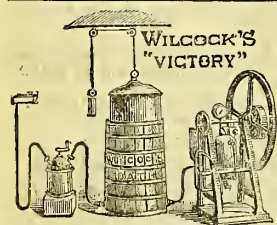
## SODA WATER MACHINE.

EASY TERMS.

CATALOGUE FREE.

WRITE TO

N. G. WILCOCKS,  
BACK STREET, BATH.



MANUFACTORY:  
BATH CITY BRASS FOUNDRY  
AND IRONWORKS,  
BECK STREET.  
N. G. WILCOCKS,  
BATH, SOMERSET,  
ENGLAND

"ABSOLUTELY PURE."  
SEE ANALYSIS, sent post free on application.



REGISTERED.

## ELLIS'S RUTHIN WATERS.

ESTABLISHED 1825.

"CRYSTAL SPRINGS." Renowned for their purity for HALF-A-CENTURY. Situated on the premises, and exclusively the private property of the Firm.

Soda, Potass, Seltzer, Lemonade, Aromatic Ginger Ale. For Gout; Lithia Water, and Lithia and Potass Water. Corks branded—"R. ELLIS & SON, RUTHIN," and every Label is registered, and bears their Name and Trade Mark.

Sold Everywhere, and Wholesale of

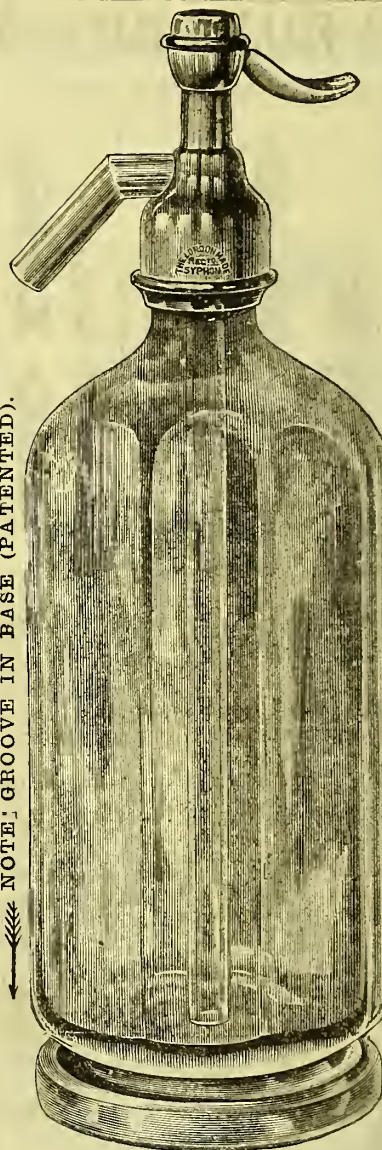
R. ELLIS & SON, Ruthin, NORTH WALES,  
Manufacturers to the Royal Family.

London Agents: W. BEST & SONS, Henrietta St., Cavendish Square.

# THE "LONDON-MADE" SYPHON BOTTLE

(TITLE REGISTERED.)

Obtained the HIGHEST AWARD at the International Health Exhibition, London, 1884.



The high reputation of this bottle has arisen due to the fact of its being in every particular the most perfect introduced; and when compared with others in the market it stands pre-eminent. It is not simple in its working parts, therefore least liable to get out of order; it is the most easily opened, lightest pressure on the handle being sufficient to produce a most highly-charged gas water than is usually obtained from siphon. It compares most favourably in appearance with any, and its metal top being entirely free from lead, the prejudice against siphon drinks is at once removed, as the liquid passes over pure only.

All our Syphons now fitted at the bottom with a groove, so that drips from the spout that run down the side are prevented from soiling the table.

NOTE.—Syphons made with our patent foot collecting excess of liquid dripping from the spout after use are supplied at no extra charge, and will be found of great utility in preventing stains, &c., upon table linen. This is a desideratum long been wanted particularly for private house use. Send sample; forwarded upon receipt of 2s.

Any name, crest, trade-mark put on the glass by an improved process, at from 18s. to 24s. per gross. There is three-fold advantage in this, as it forms a continual advertisement, is great ornament, and preventive of fraud. The plate for engraving costs extra from 5s. upwards according to the artist's device required.

## PRICES (WHITE, BLUE, GREEN, OR AMBER):—

	By the gross, per doz.	Less than 1 gross per doz.
Quart size	£1 2 0	£1 4 0
Pint size	1 1 0	1 3 0
Half-pint, Pear shape	1 0 0	1 2 0
Octagonal vases, any colour (including Azure Blue)	1 4 0	1 6 0

Tops, nickel-plated, from 5s. 6d. per doz. extra. Tops, silver-plated and burnished from 9s. per doz. extra. A charge is made for packing, except when ordered in original patent bin cases (holding one dozen each, price 2s. 6d. each).

Special Prices and Terms to Large Buyers.

## BARNETT & FOSTER MINERAL WATER ENGINEERS,

Manufacturing Chemists, and General Providers for the Aerated Water Wine, Beer, and Cyder Trades.

"Niagara Works," 26<sup>th</sup> Eagle Wharf Road, London, N.



# SODA-WATER MACHINERY

## SPECIAL NOTICE.

BRATBY & HINCHLIFFE have pleasure in introducing to the TRADE their

# NEW "CHEMISTS" SODA-WATER PLANT.

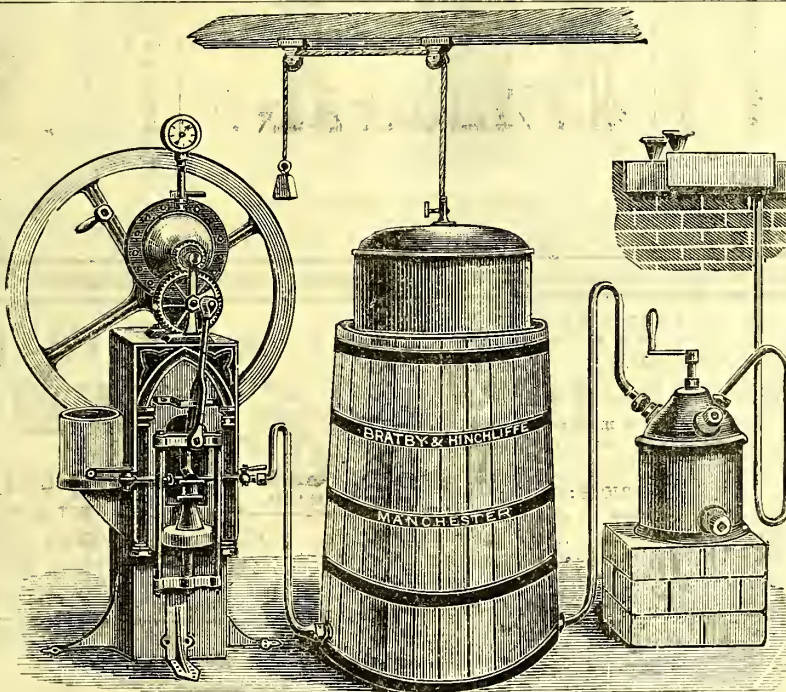
Makes all the popular  
Aërated Beverages.

Can be started at a  
minute's notice.

Suitable for Export.

Cheapest and Best  
Soda-water Plant  
in the Market.

Specially made for  
"Chemists."



Guaranteed to pro-  
duce pure high-class  
Aërated Waters.

Full Instructions to  
Manufacture all kinds  
of Aërated Waters are  
given with each Plant.

Capable of manufac-  
turing 100 doz. full-  
size bottles of Aërated  
Waters per day.

**PRICE: "Chemists" Soda-water Plant complete, £28.**

Specially designed for Chemists, Hotel-keepers, and Regimental Messes. BOTTLING MACHINES, £8 extra.

## EVERY REQUISITE

FOR AN AERATED WATER MANUFACTORY SUPPLIED.

WRITE FOR ILLUSTRATED CATALOGUE, FORWARDED FREE.

# BRATBY & HINCHLIFFE,

SANDFORD STREET, ANCOATS, MANCHESTER, and  
146 MINORIES, LONDON, E.C.



# GUERET <sup>NC</sup> FRÈRES,

PARIS.] 72 Boulevard de la Gare, 72. [PARIS.]

ENGINEERS, PATENTEES IN FRANCE AND ABROAD OF  
**IMPROVED MACHINERY FOR THE MANUFACTURE OF SODA-WATER.**

GOLD MEDAL, AMSTERDAM, 1883.

**APPARATUS GAZOSELTZ CONTINUAL,**

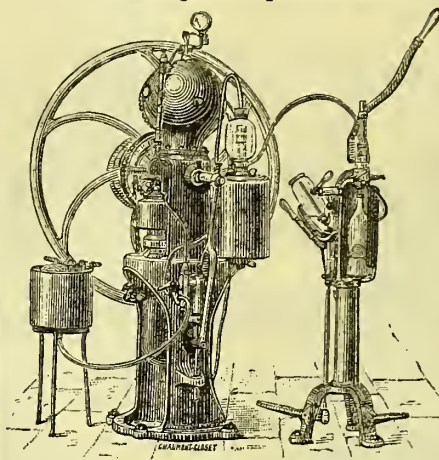
Without Gascmeter, with automatic distribution of the acid. The only ones which work under a regular pressure as long as the operation lasts.



Syphons,  
Short lever.  
Price—  
20/6 per dozen.

All the fittings manufactured by ourselves, and of the best workmanship.

PURE ENGLISH TIN, FIRST QUALITY.



Complete Plant, Model No. 1,

Showing the Generator with Combination filler (for bottles and syphons), Price £48. Production 1,200 syphons daily.

PROSPECTUS FREE ON APPLICATION.

Caps guaranteed to be made of best English Tin, and free from lead.

OUR TOPS ARE ALL NICKEL-PLATED.

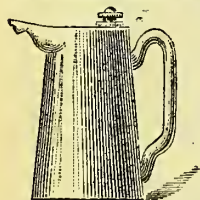


Gueret Seltzogene.

Cane or Wire covered.

## L'HOTE'S APPARATUS

(Patented S.G.D.G.)  
FOR SELTZER WATER & AERATED BEVERAGES.



1/7th of actual size.

This Apparatus is made entirely in PORCE-LAIN. No Repairs necessary. No Explosions possible. The cheapest of Table Apparatus.

PRICES:—

- Two Bottle Apparatus .. 5fr. 75c. (4/7½)
- Three-Bottle Apparatus .. 8fr. 25c. (6/7½)
- Powders for the Two-bottle Apparatus (Ten charges) 1fr. 20c (1/)
- Powders for the Three-bottle Apparatus (Ten charges) 1fr. 80c. (1/6)

Discount to Pharmacists and Druggists.

**F. PAQUET, Manufacturer,**  
1 Cite Trevisé, PARIS.

## T. & F. J. TAYLOR'S



**AËRATED WATERS**

*Newport Pagnel.*

ESTABLISHED 1835.

**SODA, POTASH, SELTZER, AËRATED (witho  
Alkali), and LITHIA WATERS,  
LEMONADE AND GINGER ALE.**

*Each Bottle is protected by a Label bearing the Signature of the Firm.*

*Purity and Excellence of the Water certified by Analysis by Professor ATTFIELD. Ph.D. F.C.S.*

## VALLET'S PATENT IMPROVED STOPPERED BOTTLES,

For Mineral Waters and Gaseous Liquids,  
Are now used by upwards of 1000 Soda Water Manufacturers in the United Kingdom.

PRICES (Per Gross).—Patent Stopper, as per Fig. 1, 4/6; ditto, as per Fig. 6, 4/6; ditto, as per Fig. 7, 4/6; Patent Stoppered Bottles, ready for use, 1 ditto Half Bottles, ditto; Patent Unstoppered Bottles, ditto Half Bottles; Fig. 9, Boxwood Bottle Openers, polished, 8/6; ditto, fitted with rubbers, 10/6; Common Wood Bottle Openers, 5/6; ditto, fitted with rubbers, 7/6; Fig. 10, New Bottle Opener, 6/-.

**ROYALTY FREE.**



Fig. 2.



Fig. 6.



Fig. 1.



Fig. 7.

It will be seen by reference to figs. 6 and 7 that I now form a button or nut under the base of my Stopper for the purpose of easily extracting same from the Bottle without spoiling or removing the india-rubber from the body of the Stopper. This is readily accomplished by the use of a suitable tool made to fit on the nut; the Stopper being grasped withdrawn from the bottle in a second, without injury to the Stopper. Therefore, it will be a great saving to Mineral Water Manufacturers, as by the old way of extracting the Stoppers from the Bottle when necessary, very often the india-rubber is spoiled, and the time taken by this slow process is worth more than the Bottle itself; so that in many instances Bottles with spoiled or dirty Stoppers are put aside as worthless stock.

Figs. 1 and 6 Stoppers, when invoiced without Bottles, are ready fitted with the rubber washer on, and are easily inserted into the Bottle by the simple pressure of the thumb, the washer at the same time folding in the hollow part of the stem, when passing into the Bottle; and the only Stoppers which require no tool to fit into the Bottle; and when a Bottle breaks, which seldom occurs, the Stoppers are always fitted with washer and ready to be inserted in a new Bottle. Therefore they are the most durable and inexpensive Stoppers in the Trade.

Sample and Particulars sent on application to

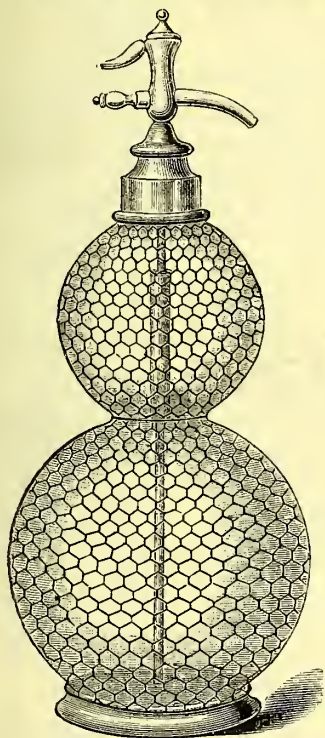
**L. VALLET, 49 EVERTON RD., LIVERPOOL**



THE  
**IDRIS**  
**SELTZOGENE.**

Unequalled in Style and Finish.

**CANE OR WIRE COVERED.**



*For Price List and Terms,*

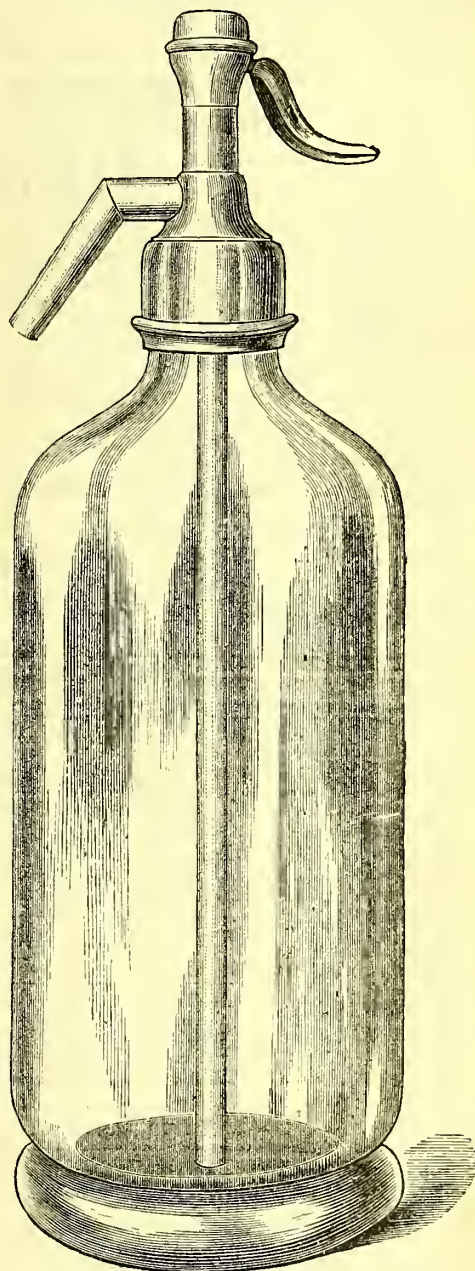
APPLY TO THE

**IDRIS**  
**MANUFACTURING COMPANY,**

ASCHAM STREET,  
LONDON, N.W.

THE  
**IDRIS SYPHON**

*Is the best in the Market, combining the elegance  
of the French with the strength and superiority  
of English workmanship.*



Intending purchasers should apply  
for samples and prices, before placing  
their orders, to the

**IDRIS MANUFACTURING CO.,**  
**Ascham Street, London, N.W.**

Tops guaranteed to be made of Best English Tin and  
free from Lead.



# THE ONLY PRIZE MEDAL FOR SYPHONS AND SELTZOGENES,

EXHIBITED, IN COMPETITION WITH THOSE OF OTHER LEADING MAKERS,

AT THE

INTERNATIONAL HEALTH EXHIBITION,

LONDON, 1884,

HAS BEEN AWARDED TO

## THE BRITISH SYPHON MANUFACTURING CO.,

EUGSTER & KOERTGEN, Proprietors,  
2 Gresham Buildings, Guildhall, E.C. **LONDON.**  
Works, Wickham Street, Lambeth.

SEVEN GOLD, SILVER, AND OTHER PRIZE MEDALS FOR  
*Very superior Quality, Make, and special Excellence of Finish.*

Metal beautifully Polished, and warranted free from Lead.

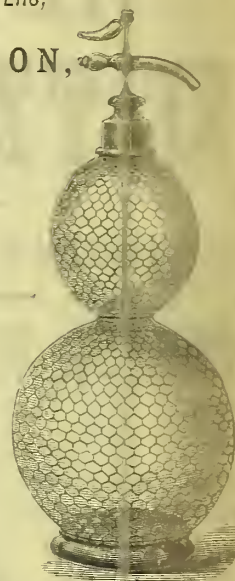
IMPORTANT.

GUARANTEED PERFECT,

AND OF FIRST-CLASS

WORKMANSHIP.

ALL OUR APPARATUS ARE STAMPED THUS



### PRICES FOR SYPHONS.

Short Levers	..	..	..	..	..	22/6 per doz.
Long	..	..	..	..	..	24/
Octagonal or Diamond Vases	..	..	..	..	..	1/6 per doz. extra
Superior Nickel-plated Tops	..	..	..	..	..	4/6
Strongly Silver-plated Tops	..	..	..	..	..	9/

### PRICES FOR SELTZOGENES

3-pint Size, wire covered..	13/	..	Cane covered..	13/6
5-pint	..	..	18/	..
8-pint	..	..	30/	..
LIBERAL DISCOUNT.				
With Silver-plated Top or Wire	..	..	..	5 extra
<i>Drop Cups, Measures, Extra Fittings for Chairs.</i>				

## CAUTION.

To ensure the purchase of the genuine celebrated SELTZOGÈNES OF D. FÈVRE which do not cost more than the imitations, observe on the shoulder of the apparatus the words "VERITABLE SELTZOGÈNE DE FÈVRE," and the Trade Mark signature

Weight of the cases: Cases containing 6 8 pints, about 90 kilos; 12 5 pints, about 90 kilos; 12 3 pints, about 60 kilos.

SELTZOGÈNES CANED & WIRED.

ALL MY GOODS ARE TESTED.

OFFICE—

WORKS—

398 Rue St. Honoré, Paris.

9 Rue Castex (near the Bastille), Paris.

MELBOURNE EXHIBITION—First Order of Merit awarded to  
Thessier-Fèvre.

Celebrated D. Fèvre Seltzogenes and Powders. for immediate  
production of Soda Water. Eau de Vichy, Sparkling Lemonade, and Atrated  
Wines.

D. Fèvre, 398 Rue St. Honoré, Paris, Sole Inventor  
and Proprietor of the Article and Name "SELTZOGÈNE." The-  
sier-Fèvre, Son-in-Law, Manufacturer.

WHOLESALE PRICES.—Celebrated D. Fèvre Seltzogenes.—3 pint, wire covered, 12s. each; 3 pint, cane covered, 12s. 6d. each; 5 pint, wire covered, 18s. each; 5 pint, cane covered, 19s. each; 8 pint, wire covered, 30s. Liberal discount allowed.

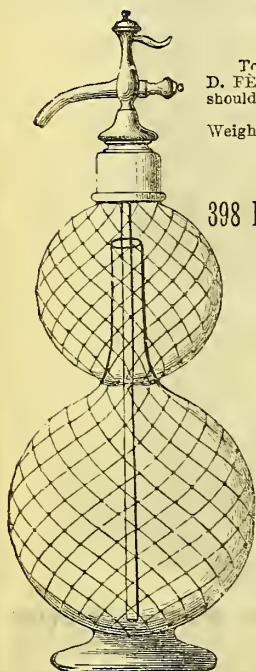
Case and Packing.—12 Seltzogenes, 3-pint size, 4s. net; 12 Seltzogenes, 5-pint size, 5s. 8d. net; 6 Seltzogenes, 8-pint size, 9s. 8d. net.

### CELEBRATED D. FÈVRE POWDERS FOR THE SELTZOGÈNES.

Pure Tartaric Acid and Bicarbonate of Soda in the highest  
state of perfection.—3 pint, per dozen boxes of 12 charges, 24s.; 5 pint, per  
dozen boxes of 12 charges, 36s.; 8 pint, per dozen boxes of 12 charges, 60s.;  
3 pint, per dozen boxes of 10 charges, 20s. 6d.; 5 pint, per dozen boxes of 10  
charges, 30s. 6d.; 8 pint, per dozen boxes of 10 charges, 45s. 2d. Liberal dis-  
count allowed.

Extra—Taps, Tubes, Valves, Washers, &c. Direction  
for Repairs. Drip Catchers, Fittings, Measures, &c.

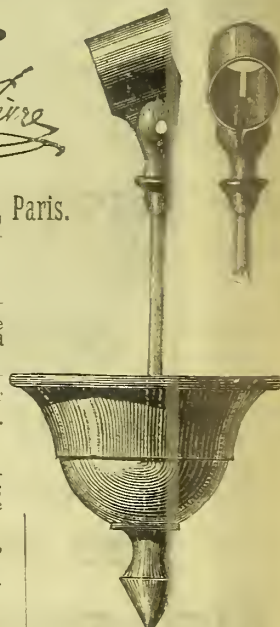
ILLUSTRATED CATALOGUE FORWARDED FREE.



TRADE MARK.



REGISTERED.



D RIP CATCHERS

D. FÈVRE SELTZOGÈNES.  
8s. 6d. p. dozen.

Registered April 1, 1879,  
No. 3,951.

THESSIE-FÈVRE,  
SOLE MANUFACTURER.





## Foster's Patent Screw-Stoppered Bottle

(The Original Patentee of Screw-Stoppers)

(The Original Patent of Screw-Stoppers)

**"THE INTERMITTENT"**

(Gained the Gold Medal at the International Health Exhibition, London, 1884, in Competition).

*The Advantages of which may be enumerated as follows:—*

**NO ANNUAL ROYALTY CHARGED.**

AS COMPARED WITH CORKS—

No Corks to fly out! No Corkscrew required! No Cork Dust in the Drink!  
No splashing in opening! A better quality of Water is obtained in them!  
More highly-charged with Gas! A small quantity can be taken at inter-  
mittent periods, and the remainder kept bright and sharp for future use!  
The most delicate hand can open them!

AS COMPARED WITH OTHER SCREW-STOPPERED BOTTLES—

They are much cleaner than the black composition stoppers, which, being soluble, contaminate the Waters!

Foster's Patent Stopper is made of wood, properly prepared, to prevent swelling or leakage; and nothing can be cleaner!

The ring making the joint is fitted into a groove on the stopper, and does not come off!

The diameter of the rim of Stopper being larger than the neck of bottle, a good grip is afforded for opening.

**PRICES OF BOTTLES—**

IMPERIAL HALF-PINTS, for Mineral Waters ... Per gross, £0 14 0

" SPLITS "	"	"	"	0 12 0
------------	---	---	---	--------

STOPPERS ONLY, 12/ per gross.

*Sample, filled with Aërated Water, forwarded upon receipt of 1s. in stamps. Every description of Screw-Stoppered Bottles supplied for Beer, Wines, Spirits, &c.*

## FOSTER'S PATENT BOTTLE BIN CASES.

For holding 2 dozen of the Intermittent or the Globe-stoppered Bottles. These Bin Cases (lately patented) are the strongest, most compact, and lightest of any in the market, being constructed on an entirely new principle.

Price, for either Full size or Split Bottles, 2/ each by the 100. Sample forwarded on receipt of 2/6.

# CODD'S PATENT GLOBE-STOPPERED BOTTLE.

(BARNETT & FOSTER, Sole Agents.)

AS compared with other Patent Internally-Stoppered Bottles it stands pre-eminent—there is no taste from rubber, the stopper being a glass ball; the internal pressure keeps this firm against the elastic collar in the neck. The Stopper does not fall into the Gaseous Waters, so that the Water retains its full Gaseous properties when emptied into a tumbler.

The great speciality in this bottle is that the stopper *does not go into the liquid*, thus insuring perfect cleanliness and a more highly gaseous water. It is obvious that internal stoppers which project outside the bottle have many objections—they collect dust and dirt, and come into contact with the hand in opening; and these impurities, falling into the bottle with the stopper, become incorporated with the drink, and are poured out into the glass.

**REDUCED PRICE OF BOTTLES, 10-oz. 28s. per gross. 5-oz. 26s. per gross.**

**BARNETT & FOSTER.**

Mineral Water Engineers, Manufacturing Chemists, and General Providers to the Mineral Water,  
Wine, Beer, and Cyder Trade,

NIAGARA WORKS, 26<sup>T</sup> EAGLE WHARF ROAD, LONDON, N.

LATEST AWARDS—3 GOLD, 2 SILVER, AND 2 BRONZE MEDALS AT THE INTERNATIONAL HEALTH EXHIBITION, LONDON, 1884.

*Illustrated Catalogue of every speciality for the above Trades forwarded free.*



THE ONLY PRIZE MEDAL.



LONDON, 1881.

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HIGHEST PRIZE MEDAL.



BRADFORD, 1881.

ASSOCIATION, LIMITED.

## TO CHEMISTS NOT SHAREHOLDERS.

I beg to draw your attention to the great success which has attended this Association during the past three years. There are now about One Thousand Chemists on the Books, and Dividends of  $3\frac{3}{4}$ , 5, and 6 per cent. have been paid for the years 1882, 1883, and 1884 respectively.

These facts are most substantial proofs of the satisfaction given to our Shareholders and their Customers, and of the excellence of the Waters manufactured. I therefore feel convinced it would be greatly to our mutual advantage were you to favour us with your trade, for the more the trade the larger the profits, and the greater the possibility of an early reduction in prices.

I have much pleasure in informing you that Twenty £1 Shares have been placed in my hands for transferring to Chemists (only) wishing to join the Association. Not more than one can be transferred to each Chemist, applications for which will be taken in the order in which they are received. Sample orders sent if required.

Trusting to have your valued support,

H. T. BUTLER, Secretary.

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Sun Factory, Victoria Road.

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Montpellier Works, Starbeck.

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TO HER MAJESTY THE QUEEN.

## MUMBY'S MINERAL WATERS

Are Perfectly Pure and of First-class Quality.

**SODA WATER, POTASS WATER,  
SELTZER WATER, TONIC WATER,  
GINGER ALE, LEMONADE, &C.**

### IMPORTANT TESTIMONIAL.

H.M.S. "SERAPIS," Portsmouth, 25th May, 1876.

Messrs. C. MUMBY & Co.,

Gentlemen,—The Soda Water supplied by you for the use of H.R.H. The PRINCE OF WALES on board H.M.S. "Serapis" was of excellent quality, kept in good condition, and gave great satisfaction to His Royal Highness, his suite, and the officers of the ship.

(Signed) THOMAS BRADBRIDGE, Paymaster.  
T. W. SCADDAN, Chief Steward.

These Celebrated Waters can be supplied in  
Syphons with Silver-plated Tops.

GOODS CARRIAGE PAID. PRICES ON APPLICATION.

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London Agents — Walker & Moore, 17 Redcross St.

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CELEBRATED

**AROMATIC GINGER ALE,  
SPARKLING MONTSERRAT  
"CLUB SODA," AND  
MINERAL WATERS**

As supplied to Her Majesty's Imperial Houses  
of Parliament,

Have been Awarded TWENTY-THREE GOLD AND  
PRIZE MEDALS at the various International  
Exhibitions.

Goods for Export are specially prepared, and are guaranteed  
to keep in any climate.

PRICES AND TERMS ON APPLICATION TO—

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BELFAST AND DUBLIN.**



# JEWSBURY & BROWN'S MANCHESTER MINERAL WATERS,

**PURE SODA, SELTZER, POTASH, LITHIA, &c.,  
LEMONADE,  
GINGER ALE, AND QUININE TONIC.**

*Prepared and Bottled specially for Export, and warranted to keep well.*

Manufactured with the utmost care and by improved machinery, these productions are recommended for **purity and excellence of quality** by many leading members of the Medical Profession, and have for many years had a preference by the public; the flavour of the **Lemonade and Ginger Ale** being procured from the **fresh Fruit and Finest Jamaica Ginger**, they may be relied upon as furnishing delicious and satisfactory beverages, either for general use or specially for invalids.

The **Soda Water** is absolutely free from any metallic impregnation, and being by improved machinery highly charged with Carbonic Acid Gas, and each bottle containing a definite and unvarying proportion of **Pure Carbonate of Soda**, J. & B. have every confidence in inviting a trial from those who have not already patronised them.

The **Seltzer, Potash, and Lithia Waters** are prepared with the utmost exactitude and the purest ingredients.

The **New Quinine Tonic** furnishes a pleasant form for the administration of a most valuable restorative, and is refreshing and agreeable.

**Ginger Ale (Aromatic)** of superior quality, and strongly recommended as a Non-Alcoholic and warm stimulant beverage.

*N.B.—Every Bottle is protected by a distinctive Label, with Name and Trade Mark, and each Cork is branded.*

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A CERTIFICATE OF MERIT, for superiority of quality, was awarded to Jewsbury & Brown at the Exhibition of Sanitary Appliances, at Owens College, Manchester, on the occasion of the Meeting of the British Medical Association, August, 1877.

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**JEWSBURY & BROWN, 44 Downing Street, 3 Grosvenor Street, and 113 Market Street, MANCHESTER.**

**FOUND AT LAST!  
WHAT?**

**A Temperance Beverage brewed  
entirely from Malt and Hops  
and absolutely free from  
Alcohol.**

In proof of this, see Dr. O.  
Bostock HILL'S (County  
Analyst, &c.) re-  
port upon each  
label.

**SALUS**

Has a pleasant flavour. Is a good appetizer, the best Hops only being used. Is refreshing and stimulating, without the injurious effects of Alcohol.

Sample orders of 6 doz. Champagne Pints sent, carriage paid to any Railway Station in England, on receipt of 28s.; 10s. allowed for case and bottles when returned to the

**SALUS MANUFACTURING COMPANY,**  
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**NEW AND IMPORTANT DISCOVERY.**

**GINGER ALE**  
FROM PURE JAMAICA GINGER.



THE ROYAL YORKSHIRE GINGER ALE, from Pure Jamaica Ginger, is Non-Intoxicating.

The difficulty of using Ginger in the Manufacture of "Ginger Ale," and at the same time having a CLEAR and SPARKLING DRINK, has, after much labour and expense, been thoroughly overcome by

**Messrs. HARSTON & CO., of LEEDS.**

ABSOLUTELY PURE.—See Analysis by Drs. J. H. HASALL, M.D., and OTTO HEINER, F.C.S.

**LA BOURBOULE,**

AN EMINENTLY RESTORATIVE MINERAL WATER.

Contains Chloride of Soda, Bicarbonates, Arsenics (28 millig. of arseniate of soda per litre).

Dose: Half a glass to three glasses per day before or during meals.

A Regenerator for Weakly Children, and for Debility in Adults; also in Anæmia, Fatty Degeneration, Affections of the Skin and Respiratory Organs, and Intermittent Fevers. Employed as a drink and in gargles for Bronchitis and Sore Throat, and as a drink and lotion in Ringworm, Chaps, and Redness of the Skin.

Anglican Divine service on Sundays.  
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By Special Appointment to

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**BOURNE WATERS.**

THE PUREST IN ENGLAND.

**R. M. MILLS & CO.,**

BOURNE, LINCOLNSHIRE,

MANUFACTURERS OF

**SODA, POTASH, LITHIA, AND SELTZER WATERS,  
LEMONADE, AND AROMATIC GINGER ALE.**

4-dozen and 6-dozen Cases Carriage Paid.

Prices and Pamphlet on application. Agents appointed.



# HAY'S SOLUBLE ESSENCE OF MESSINA LEMONS,

FOR THE PRODUCTION OF

THE FINEST LEMONADE.

Added in the proportion of one fluid ounce to each gallon of syrup, the soluble essence imparts the most delicious flavour of the Lemon.  
—The Chemist's Journal.



The Essence mixes well with water, and has a delicate flavour. The Lemonade made therewith has a far more delicate flavour than that generally met with.—  
The Chemist and Druggist.

Trade Price, 8/6 per lb.; 12 lbs. and upwards, 8/.

PREPARED BY

**W. HAY, Manufacturing Chemist,**  
**BEVERLEY ROAD, HULL.**

# HAY'S GINGER CHAMPAGNE

CAN BE OBTAINED FROM THE SOLE AGENTS,

**INGRAM & ROYLE,**119 QUEEN VICTORIA STREET, LONDON, E.  
AND BATH BRIDGE, BRISTOL.

Retail Price, in Half Champagne Bottles, 5/6 per doz.

This SPARKLING, EXHILARATING, and REFRESHING DRINK, being far more agreeable in bouquet and flavour than the FINEST CHAMPAGNE WINE, is, at the same time, unlike it, FREE from ALCOHOL. It is strongly recommended both for Juveniles and Adults, &c., as the most Wholesome Stimulating Beverage that has hitherto been introduced, and should be in every household during all seasons of the year.

Samaritan Free Hospital, Lower Seymour Street,  
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Dear Sir,—I have tried your Ginger Champagne, which I find to be excellent, and I look upon it as a step in the right direction towards meeting a long-felt want. Our Senior Physician, Dr. Henry Saxe, has also tried it, and is much pleased with it. We ought long ago to have had such a beverage, if I believe that a great deal of drinking would thus have been prevented. I wish your effort much success.

I am, dear Sir, yours faithfully,

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An excellent and most agreeable beverage.—*The Lancet.*

Made by Mr. Hay, of Hull, with his well-known SOLUBLE ESSENCE OF JAMAICA GINGER, takes rank as a PURE, WHOLESOME, STIMULATING, and ALCOHOLIC beverage.—*British Medical Journal.*

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OFFERS:—

**CAPSICINE  
GINGERINE  
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OIL OF CLOVES**

**ESSENCES.  
FRUIT  
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ETHERS**

Address—Cambrian Mills, Wood Street, LIVERPOOL.

FOREIGN

## MINERAL WATERS.

FREDERICKSHALL (5 Cases, 6d. per Case less), 28/ Case, 30 bot.; 39/ Case, 60 1/2-bot.

APOLLINARIS WATER, 25/- Hpr., 50 bts. 39/- Hpr., 100 1/2-bts.

"Carriage paid." Hampers free.  
5 per cent. discount if 20 Hampers.

HUNYADI JANOS (10 Cases, 3/- and 5/- less), 30/- Case, 25 bts.; 50/- Case, 50 1/2-bts.

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FULLNA ... 18/- Case, 20 bts. 30/- Case, 50 1/2-bts.

VICHY ... 31/- " 50 bts. 37/- " 50 1/2-bts.

CARLSBAD ... 37/- " 50 bts. 42/6 " 50 "

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ARLSBAD ALTS, 1-Bots., 20/- per doz. 40/- per doz. 2-Bots., 20/- per doz. 40/- per doz.



REGISTERED AT STATIONERS' HALL.

## NORWAY BLOCK ICE

FROM FINEST LAKES IN  
CHRISTIANIA.

Professor Frankland's report with analysis. "The ice is exceedingly pure, and contains no foreign matter than any water with which I am acquainted in this country."

Original Blocks

(2 to 3 cwt. each) 2s. 0d. per cwt.  
1 cwt. to 2 cwt. .. 2s. 6d. per cwt.  
1/2 cwt. to 1 cwt. .... 3d. per lb.  
Under 1 cwt. .... 1d. per lb.  
Packing free. Utmost promptitude in despatch.

**W. B. HARRISON**

Importer of Ice and Mineral Waters

6 BRIDGE ST., SUNDERLAND.



# W. J. BUSH & CO.,

Distillers and Importers of

## ESSENTIAL OILS AND FRUIT ESSENCES,

*SOLUBLE ESSENCES FOR AERATED WATER*

AND CORDIAL MANUFACTURERS.

W. J. B. & CO.'S "SPECIALITY" ESS. LEMON is double the strength of ordinary commercial qualities.

W. J. B. & CO. caution the Trade against the so-called soluble Essences now so frequently offered for sale, which are nothing more than mere tinctures, and, although offered at lower prices, cost five or six times as much in use, whilst imparting a strong medicated flavour.

The importance of our invention of Soluble Essences is clearly shown by the numerous imitators and copyers that have sprung up, and we must inform the TRADE that ours are the only GENUINE ORIGINAL SOLUBLE ESSENCES.

## FRENCH CREAM GUM EXTRACT,

PROTECTED BY ROYAL LETTERS PATENT,

*For producing a head of Creamy Richness upon all kinds of Syrups, Aerated Waters, Beers, Ales, Cider, Champagne, &c., 2s. 6d. per pound.*

W. J. BUSH & CO. regret having to Caution the Trade against spurious imitations of this article, most of which being mere rubbish.

## W. J. BUSH & CO.'S

## ENGLISH DRAWN ESSENTIAL OILS.

OL. AMYGD. ESSENT. ANG.

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GOLD MEDAL, LONDON.



**SIX GOLD AND PRIZE MEDALS,**  
**1884,**  
AWARDED TO  
**LORIMER & CO.,**  
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**CHEMICALS, PHARMACEUTICAL PREPARATIONS, and FRUIT ESSENCES, bottled and in bulk for Export.**

CITRATE OF IRON AND QUININE, SULPHATE QUININE, ETC. SOLUBLE ESSENCES. TINCTURES AND SPIRIT PREPARATIONS IN BOND, ETC.

Agents Wanted in every City for the sale of Lorimer's well-known Specialities—"Chemical Food," "Quinine Wine," "Quinine and Iron Tonic," "Cod Liver Oil," "Lime Juice Cordial," "Citrate of Magnesia," "Flavouring Essences," and "Fruit Syrups," the sale of which is certain and profitable.

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References: MESSRS. BARING BROS. &amp; CO., LONDON.

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*Of Lemon, Bergamot, Sweet and Bitter Orange. Recently Awarded at the Exhibitions of*

**CALTANISSETTA, 1879**—A Gold Medal and 200 Liras for Invention of Machinery to the use of their Manufactory, and Silver Medal for Excellence of Produce.

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**MESSINA, 1882**—A Gold Medal and 130 Liras for an ample set of Machines to the use of their Manufactory, and a Bronze Medal for Excellence of Produce.

*A first trial order is quite sufficient to remain convinced of the Excellence of our Essences.*

Samples and all particulars may be had from our Wholesale Agents—

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**KING'S EFFERVESCENT CITRATE OF MAGNESIA**

Is the BEST PREPARATION ever introduced for the use of EMIGRANTS, TRAVELLERS, AND INHABITANTS OF WARM OR TROPICAL CLIMATES.

This Citrate has been patronised by Royalty, by Her Majesty's Diplomatic Agents Abroad, and was awarded a Prize Medal at the Exhibition of 1851.

NUMBERS of the MOST EMINENT PHYSICIANS and SURGEONS in London and throughout the kingdom use KING'S MAGNESIA for THEMSELVES and FAMILIES, and have given certificates testifying that it is THE BEST and MOST AGREEABLE APERIENT EVER INTRODUCED, and that in ALL CASES OF SICKNESS, HEADACHE, LASSITUDE, ACIDITY or IRRITABILITY of the STOMACH, CONSTIPATION, &c., &c., it can be used with the GREATEST SAFETY and BENEFIT, and as a COOLING DRAUGHT in ALL cases of FEVER it has NO EQUAL.

TESTIMONIALS have also been received from CAPTAINS of VESSELS and OTHERS who have on voyages to the BRAZILS and other TROPICAL PARTS, and have ESCAPED THE YELLOW AND OTHER FEVERS, while DAILY EXPOSED to the INFECTION; and attribute their EXEMPTION (when others have succumbed) to the PREVENTIVE effects of KING'S EFFERVESCENT CITRATE OF MAGNESIA; and they RECOMMEND that the Citrate should be taken by EVERY EUROPEAN wishing to VISIT or RESIDE IN SAFETY in TROPICAL or FEVER-PREVALENT CLIMATES.

A small teaspoonful of the Citrate in a tumbler of cold water makes an AGREEABLE COOLING EFFERVESCENT BEVERAGE.

Sold only in Glass-stoppered Bottles by Chemists and Druggists everywhere, and by the Sole Manufacturers and Proprietors—

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Be sure to get KING'S EFFERVESCENT CITRATE OF MAGNESIA, which will give entire satisfaction.



# INTERNATIONAL HEALTH EXHIBITION.

## MAIGNEN'S PATENT

# "FILTRE RAPIDE."

GOLD MEDAL

FOR

WATER "FILTRE RAPIDE."

SILVER MEDAL

(HIGHEST AWARD)

FOR

Wine, Spirit, Beer, and Syrup

"FILTRE RAPIDE."

GOLD MEDAL

FOR

ARMY "FILTRE RAPIDE."

SILVER MEDAL

(HIGHEST AWARD)

FOR

WATER-SOFTENING Process for Boilers  
(Saving Life in Workshop).

BRONZE MEDAL (HIGHEST AWARD) FOR

MAIGNEN'S Patent "ANTI-CALCAIRE" Powder  
To SOFTEN WATER for WASHING.

Full particulars in Pamphlet, "Water, Preventable Disease, and Filtration," by P. A. MAIGNEN, 32 St. Mary-at-Hill, Eastcheap, London.

DOULTON &amp; CO., LAMBETH, LONDON, S.E.

DOULTON'S MANGANOUS CARBON  
FILTERS (Dr. Bernays's Patent).

The Combination prepared under this Patent gives to the Charcoal its highest value as a

FILTERING MEDIUM.

The Filter is made in four movable parts—the body, the lining, the Manganous Carbon block, and the cover. By this means every portion of the Filter may be

KEPT PERFECTLY CLEAN,

and the Manganous Carbon block may be changed as often as necessary WITHOUT PARTING WITH THE FILTER.

DOULTON'S IMPROVED GRANULAR  
CHARCOAL FILTER.

In addition to the bed of Granular prepared Charcoal, these Filters are fitted with a movable block of MANGANOUS CARBON in place of sponge. This arrangement, whilst acting as a screen for suspended matters, gives a double action to the power of the FILTERING MEDIA.

Any Description of Filter Refitted at  
Moderate Charge.

DOULTON &amp; CO. also manufacture Boudoir or Table Filters, Pocket and Syphon Filters for Tourists' use, Manganous Carbon Self-Acting Cistern Filters, Refrigerator Filters, High Pressure Filters for manufacturing purposes, &amp;c. May be had of all Dealers.—DOULTON &amp; CO., Lambeth, London, S.E.

## THE UNIVERSAL HOUSE FILTER.

LONDON'S PATENT RAPID WATER FILTER is Economical, Cleanly, Reliable, and cannot get out of order. It purifies a quart of water in two minutes by ascension through pure Animal Charcoal. For illustrated description, see "Chemist and Druggist," July 15, 1884, page 359.

Retail Price, 6s. 6d. Liberal Trade Discount.

THE UNIVERSAL FILTER CO., 35 QUEEN VICTORIA ST., LONDON, E.C.

ANNUAL SUBSCRIPTION, POST FREE, 6s. SAMPLE COPY, 8d.

## THE MINERAL WATER TRADE REVIEW.

ESTABLISHED 1873.

The Pioneer Journal and Representative Organ of the Mineral and Aërated Water Trades.

PUBLISHED ON THE 18TH OF EACH MONTH.

J. GILBERT SMITH, 143 Queen Victoria St., LONDON.

## CHURCHILL'S CORROSIVE COMPOSITION, FOR REMOVING PAINT.

A vegetable Compound which far supersedes anything yet introduced for removing Old Paint, Varnished Paper, Grease from plain or moulded surfaces, Cleaning Stained or Smoked Marble Chimney Pieces, &amp;c. It is cleaner, a great saving in workmen's time, and gives more satisfaction than any other process.

## CHURCHILL'S AMMONIA SOAP.

CHURCHILL'S  
POWERFUL DISINFECTANT,

Instantaneous and Perfectly Inodorous.

254 LOWER BROUGHTON ROAD, MANCHESTER.

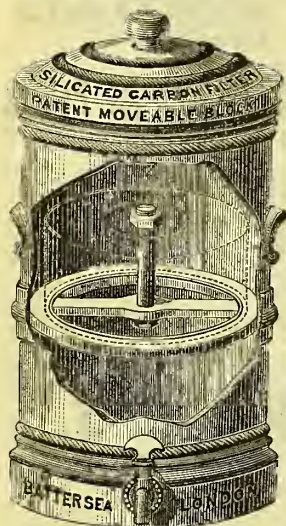
LISTS AND PRICES ON APPLICATION.



# SILICATED CARBON

## PATENT MOVEABLE-BLOCK FILTERS

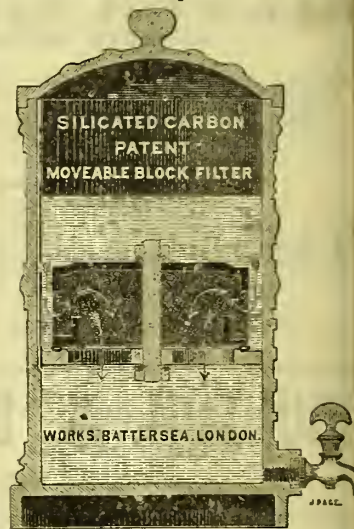
These Filters are constructed on Scientific principles, and can be renewed or repaired by the user without returning to the maker. They possess all the advantages of those with fixed filtering medium while the simple removal of the Silicated Carbon Block leaves the *whole* of the interior of the Filter open for inspection and cleansing. The working parts are stoneware, and corrosion is impossible.



(Elevation with Block removed.)

NO LOOSE PAN OR INNER VESSEL  
TO CAUSE BREAKAGE.

The block being non-porous on the top and edges, an *upward* direction is given to the water, which thus passes through a greater thickness of the Silicated Carbon, as shown by the arrows in drawing.



(Section.)

The Silicated Carbon Block can be instantly removed, leaving the whole of the interior of the Filter *open* for inspection and cleansing.

To Cleanse the block, plunge it into boiling water, and well scrub it with a hard brush.

Extra blocks can be supplied with each Filter. All parts being interchangeable can be replaced in case of accidents.

This Patent can be adapted to all patterns manufactured by the SILICATED CARBON FILTER CO. *without increased charge.* In ordering please state "*with patent moveable block.*"

Domestic Filters (as above), in Cream-coloured Stoneware, with Plated Taps and Patent Moveable Blocks:—

No. 27. O. $\frac{1}{2}$ gal. 10/6 each.	D. 6 gals. 42/- each.
A. 1 " 14/6 "	E. 8 " 52/- "
B. 2 " 21/- "	F. 12 " 70/- "
C. 4 " 32/- "	

Dining Room Filters, in Marbled China with Plated Taps and Patent Moveable Blocks:—

No. 22. A. 2 gals. 35/- each.
B. 5 " 80/- "

Refrigerative Terra Cotta do., do.:—  
No. 25. 2 gals. 31/6 each.

All makes of Filters can be refitted on this principle, 1 gal. 8/6, 2 gals. 10/-, 4 gals. 12/- each. Larger sizes in proportion.

# SILICATED CARBON FILTER COMPANY.

## WORKS: BATTERSEA, LONDON.



# SILICATED CARBON FILTERS.

## SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be



No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

- |   |       |
|---|-------|
| A.—Pocket Filter, 2½ inches diameter, in porcelain, with glass mouthpiece, in decorated metal-box .. .. .   | s. d. |
| B.—Ditto, 3½ inches diameter, in best stoneware .. .. .   | 2 6   |
| C.—Emigrant's, 5 inches diameter, with silver-plated tap .. .. .  | 5 0   |
| G.—Pocket Filter, for carrying over shoulder, as supplied to the Forces in Abyssinia and Zululand, and to the Ashantee and Egyptian Expeditions .. .. . | 12 0  |
| H.—Ditto, nickel-plated, designed by Major Fraser, R.E., and specially recommended by the Horse Guards for Officers' kits .. .. .                       | 8 6   |
|   | 5 0   |

## FILTERS.

### TABLE FILTER,

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



No. 24.

to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

### PRICES.

No. O, 2s. 6d.; A, 4s.; B, 5s. 6d.  
Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.



### DINING-ROOM FILTER,

No. 22.

WITH PATENT MOVEABLE BLOCK.

MADE IN MARBLED CHINA.

### PRICES.

- |                           |      |
|---------------------------|------|
| A .. Two Gallons .. .. .  | 35s. |
| B .. Five Gallons .. .. . | 80s. |

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

### REFRIGERATOR FILTER, NO. 25,

WITH PATENT MOVEABLE BLOCK.

Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

AFFORDING A

COOL DRAUGHT OF PURE WATER.

Price, with Silver-plated Tap .. .. . 31s. 6d.  
Capacity Two Gallons.

Specially adapted for Tropical Climates.



### MAIN SUPPLY FILTER, NO. 40,

WITH PATENT MOVEABLE BLOCKS,

FOR

CISTERN

MINERAL WATER MANUFACTORIES,

As used by Messrs. Schweppe, London, Liverpool, Glasgow, &c.; and most of the large makers.

Also for Schools, Hospitals, Mansions, &c.

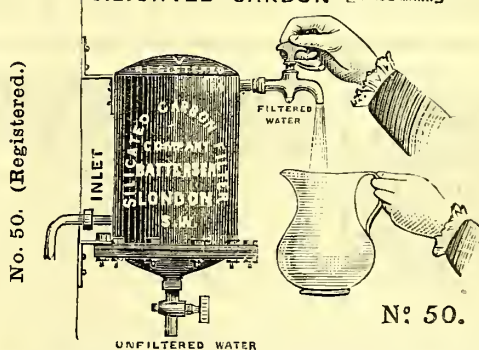
### PRICES.

- |                         |        |
|-------------------------|--------|
| For ¾-in. Pipes .. .. . | £8 6s. |
| „ 1-in. Pipes .. .. .   | £9 9s. |



### CONSTANT SUPPLY FILTER,

WITH PATENT MOVEABLE BLOCK.  
SILICATED CARBON [TRADE MARK]



No. 50. (Registered.)

No. 50.

Complete, Price £3 3s. each.

These Filters require no attention from servants, as they are always filled and ready for use. The act of drawing Unfiltered Water cleanses the Filter, by washing away the impurities collected on the carbon.

FOR FULL PARTICULARS WRITE TO THE

**SILICATED CARBON FILTER COMPANY,**  
CHURCH ROAD, BATTERSEA, LONDON, S.W.



# KREOCHYLE

KREOCHYLE IS A PURE LIQUID MEAT, CONTAINING, IN ADDITION TO THE ORDINARY "MEAT EXTRACTIVES," THE WHOLE OF THE SOLUBLE ALBUMEN OF THE MEAT IN A FORM SUCH THAT IT IS ABSOLUTELY SELF-DIGESTIVE.

FOOD AND  
STIMULANT

**BARFF & WIRE** FOR INVALIDS  
AND INFANTS.

PRICES—Retail, 5/ per pint; 2/9 per  $\frac{1}{2}$  pint;  
1/6 per  $\frac{1}{4}$  pint.

HAND-BILLS, SHOW-CARDS, AND SAMPLES SENT WITH  
EVERY ORDER IF DESIRED.

## LIQUID MEAT.

BY ROYAL LETTERS PATENT.

# BARFF BORO-GLYCERIDE

## FOOD PRESERVER.

FOR MEDICAL & SURGICAL PURPOSES.

FOR PARTICULARS CONCERNING KREOCHYLE AND BARFF BORO-GLYCERIDE APPLY TO THE

**KREOCHYLE COMPANY, 9 FARRINGDON ROAD, LONDON, E.C.**  
TO BE OBTAINED OF ALL WHOLESALE HOUSES.

## LEUBE-ROSENTHAL'S IMPROVED MEAT SOLUTION.

Prepared by R. STUETZ, Chemist, Successor to Dr. MIRUS, Jena, Germany.

This carefully prepared Meat Solution contains the real stimulating and nourishing constituents of the best quality of beef, freed of fat and sinew. It is exceedingly appetising, and easily digested even by the weakest stomach. It can be taken either entire or diluted with water. It is totally devoid of that obnoxious, nauseous taste so common to most of the meat preparations. It will keep good in hermetically closed tins for any length of time.

Retail Price per Tin, containing  $\frac{1}{2}$  lb., 2/; Wholesale, per dozen, 17/ net.

Wholesale Depot: **H. POTHS & CO, 4 Sugar Loaf Court, Leadenhall Street, LONDON, E.C.**



## DR. KOCHS' MEAT PEPTONES.

A New really Nutritious and Agreeable Food for Invalids, as well as for all persons in good health.

A solution of the long-sought scientific problem. The nutritious constituents of fresh meat peptonised and retaining the albumen, forming a product of the highest alimentary order, not liable to decompose, agreeable to the taste, invigorating, and instantly assimilable, without requiring the process of digestion. Used with the best results in the Hospitals of London, Paris, Berlin, Vienna, &c. Specially recommended for convalescents, and for sufferers from dyspepsia, poverty of blood, sudden faintness, &c. For further details, see THE LANCET of September 6th, 1884.

Sole Consignees—**WIDENMANN, BROICHER & CO., 33 Lime St., London, E.C.**

Specially adapted for the Colonies and Hot Climates, being free from all HEATING and IRRITATING Properties.

## SCOTT'S MIDLOTHIAN OAT FLOUR

Is unequalled as the most Wholesome and Nutritious Food FOR INFANTS AND INVALIDS.

SCOTT'S MIDLOTHIAN OAT FLOUR, made entirely from the finest quality of Midlothian Oats, is easily prepared, most satisfying, and invaluable in promoting the GROWTH OF BONE, and a healthy regularity of system when given to INFANTS, as it can be used through an ordinary Feeding Bottle by Infants of a few weeks old. Guaranteed perfectly pure, being free from husk and vegetable fibre.

Highly recommended and used by Eminent Physicians at Home and Abroad.

Sole Makers—**A. & R. SCOTT, Offices—(39 to 67 CROOKSTON ST.,) KINGSTON, GLASGOW**  
LONDON DEPOT AND OFFICE—14 FINSBURY SQUARE, E.C.



**MUSTARD.****FINCH, RICKMAN & CO.'S**  
Genuine Qualities

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

6 BROKEN WHARF, UPPER THAMES STREET,  
LONDON.

**USE FREE FROM ALCOHOL**  
**ARTIFICIAL OIL, OR**  
**UMNEY'S PRUSSIC ACID**  
**ALMOND**  
**ESSENCE**  
PURIFIED BY AN IMPROVED PROCESS  
WRIGHT LAYMAN & UMNEY, MANUFACTURING CHEMISTS  
SOUTHWARK, LONDON.

PREPARED

**DANDELION**

(LEA &amp; PERRINS').

MADE WITH PURE

**DANDELION ROOT & THE FINEST COFFEE.**

Sold in Tins, at 8d., 1s. 6d., &amp; 3s. each.

**LIVER TONIC**

(GEORGE &amp; WELCH'S).

1s. 1½d., 2s. 9d., and 4s. 6d. per Bottle.

**CARBOLINE (TOOTH PASTE)**

1s. 6d. per Pot.

Supplied by the Patent Medicine Houses on the  
usual terms, or the Makers

**GEORGE & WELCH, WORCESTER.**

SEVEN PRIZE MEDALS AWARDED.

**GOODALL'S**  
**HOUSEHOLD SPECIALITIES.****YORKSHIRE RELISH.**

THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viands palatable, and the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is incomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s., and 2s. each.

CAUTION.—On each Yorkshire Relish Label is a Willow Pattern Plate, and name, GOODALL, BACKHOUSE & CO. No other is genuine.

**Goodall's**  
**Baking Powder**

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and beautiful light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

**Goodall's**  
**Quinine Wine**

The best, cheapest, and most agreeable tonic yet introduced. The best remedy known for Indigestion, Loss of Appetite, General Debility, &c. Restores delicate individuals to health and vigour. In Bottles, 1s. 1½d. and 2s. 3d. each.

**Goodall's**  
**Custard Powder**

For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the utmost satisfaction if the instructions given are implicitly followed. Sold in Boxes 6d. and 1s. each.

**Goodall's**  
**Ginger Beer Powder**

Makes Three Gallons of the Best Ginger Beer in the World for 3d.

Is a delicious and invigorating beverage, possessing valuable medicinal properties. It is cooling in its nature, and a most wholesome beverage for both winter and summer. Sold in Packets, 3d. and 6d. each.

**Goodall's**  
**Blanc Mâgé Powder**

Is acknowledged by all to be the most convenient and economical preparation ever introduced, as, by its use, a most Rich and Delicious Blanc-mâgé may be produced in a few minutes at a trifling cost, and may be had of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, and Vanilla. Sold in Packets, 6d. and 1s. each.

**Goodall's**  
**Egg Powder**

Acknowledged to be the only real substitute for eggs yet discovered. Its action on Cakes, Puddings, &c., &c., resembles that of the egg in every particular, enriching them in colour and flavour, rendering them most wholesome and nutritious. One penny packet will go as far as four eggs: and one sixpenny tin as far as twenty-eight. In 1d. Packets; 6d. and 1s. Tins.

SOLE MANUFACTURERS—

**GOODALL, BACKHOUSE & CO.,** White Horse Street, Leeds.

A Monthly Price List of Druggists' Sundries, Patent Medicines, &c.  
can be had post free on application.



# Hunyadi János

**CAUTION.**—Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi János Spring, compel him to warn the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."

**KAY BROTHERS,** Operative Chemists and Wholesale Druggists, **STOCKPORT.**  
(SUCCESSORS TO SIMS, SHAW & HORNEY. FOUNDED 1786.)

Manufacturers of Fresh Fruit Essences, &c.			Sole Proprietors of Kay's Specialities.	
Acid Sulphurous.	Emp. Resinæ.	Liq. Sacch. Ust.	Kay's Compound Essence.	Linseed Lozenges. [a.
Calc. Bisulph.	Ess. Zingib (Soluble).	Oxymel Scillæ.	Throat Lozenges. [ache.	Chloro - Linseed Cereb
Dec. Senegæ Co. Conc.	" Rose Comp.	Syr. Ferri Iodid.	Instant Cure for Tooth-	Sapo-Lint, Toilet Soa
" Sarsæ Co. Conc.	" Sennæ Dulc.	" Phosp. Co.	Linum Catharticum Pills.	Absorbent Cotton W.
Emp. Plumbi.	Ferri et Ammon. Cit.	" Rhceados.	Aspirin's Wind Pills.	Cheshire Hunt Sauce
" Picis	" et Quinîæ Cit.	" Violæ, &c., &c.	Tic Pills. [Warts, &c.	De Tabley Sauce. c.
" Roborana.	" Iodidum.	Viscus (Birillime).	Painless Solvent for Corns,	Chemical Disinfectant.
				Marking Ink, for Li.

Export Orders suitably Packed and Forwarded to all parts of the World. Prices and Discounts on application.

ESTABLISHED 1812 **S. G. CLEMENTS & CO.** ESTABLISHED 1812.

Liquid Extract  
of Annatto.

**DRUG AND  
OIL  
MERCHANTS.**



PRIME

RENNET.

**SEED & DRUG  
GRINDERS.  
IMPORTERS.**

Butter  
Colouring  
in O.

Drug, Chemical, and Seed Grinders. Importers of Flag, Seed, and Roll Annatto. Manufacturers of Liquid Extract of Annatto. Cake Annatto. Roll Annatto. Butter Colouring. Milk and Butter Preservatives. Prime Rennet. Dyers' Chemicals. Dye Woods and Dye Stuffs. Aniline Colours.

THE NEWEST PRODUCTION FOR CHEESE-MAKING IS THE PRIME RENNET POWDER.

**DRUG AND SPICE MILLS, LEWIN'S MEAD, BRISTOL.**  
London Agents—BARCLAY & CO., and all Wholesale Druggists.

THE GENUINE PREPARATION OF  
**"SWEET" ESSENCE OF RENNET.**  
**McMaster, Hodgson & Co., Dublin,**  
ORIGINAL MANUFACTURERS AND PROPRIETORS

THE FOLLOWING IS A CERTIFIED COPY OF REGISTRATION, 1870:—

Time of making the Entry.	Title of Book.	Name of Publisher, and Place of Publication.	Name and Place of Abode of the Proprietor of the Copyright.	Date of First Publication.
June 30, 1870.	WARREN'S SWEET ESSENCE OF RENNET, for making Curds and Whey—Label.	M <sup>rs</sup> MASTER, HODGSON & CO., 121 & 122 Capel Street, Dublin.	M <sup>rs</sup> MASTER, HODGSON & CO., 121 & 122 Capel Street, Dublin.	June 16, 1870.

I hereby certify that the above written is a true Copy of an Entry in the Book of Registry of Copyrights and Assignments kept at the Hall of the STATIONERS' COMPANY, pursuant to Act of Parliament, 5 and 6 Vict., c. 45.

Witness my hand, this 15th day of June, 1875.

(Signed) JOS. GREENHILL.

Registering Officer appointed by the Stationers' Company.

The recommendations of this Essence are the entire absence of Salt and Mineral Acids (which are highly objectionable), and is one of the most pure and elegant preparations yet introduced for producing curds and whey; rather sweet in taste, and warranted to remain unimpaired in any climate at any length of time.

As there are numerous counterfeits, be careful to order McMaster, Hodgson & Co.'s Genuine "Sweet" Essence of Rennet.

**McMASTER, HODGSON & CO.'S**

**RENOWNED "IMPROVED" Fluid Extract of ANNATTO,**

Is guaranteed to be prepared from the pure colouring ingredients of the Annatto plant. It is perfectly soluble, always producing the same uniformity of colour; does not FADE, nor FLAVOUR Butter or Cheese.

It has been Awarded **FIRST PRIZE** at the National Agricultural Show, Victoria, Melbourne. Messrs. W. CLARK & SON, Bristol, write:—"We have introduced your improved Annatto to many of our large Dairies in the Cheddar District, and we are pleased to say it has given great satisfaction."

LONDON AGENTS:—Messrs. Cross & Blackwell, Edwards & Son, Hovenden & Son, Lynch & Co., Barclay & Son.

LIVERPOOL AGENTS:—Messrs. Evans, Sons & Co., and Ayrton & Saunders.

**McMASTER, HODGSON & CO., 121 & 122 CAPEL STREET, DUBLIN**



## CASH PRICE

20s. for 12½ GALLONS.

CASKS FREE.

School of Cookery, Crystal Palace, S.E.  
January, 1883.

MR. PETER TYRER,  
Sir,—I have been using the "Borough"  
Ketchup, and am very pleased with it. Its  
flavour is excellent, both for all kinds of  
Savoury dishes and Soups; and I most cer-  
tainly should advise every cook and house-  
keeper to use it, FOR I HAVE NEVER YET MET  
ITS EQUAL.  
MARIAN SMITHARD,  
Lectress on Cookery.

MANUFACTORY—

70 LONG LANE, BOROUGH,  
LONDON, S.E.

Scotch Agency—115 West Nile Street, Glasgow.

**DO NOT THROW MONEY AWAY**  
**BUT WRITE FOR A FREE SAMPLE OF**  
**Tyrer's "BOROUGH" Ketchup**  
**SENT FREE TO ANY ADDRESS**  
**SILVER MEDAL LONDON.**

 **SEVEN INJUNCTIONS** have been granted during the past few months.

 **CAUTION! "YORKSHIRE RELISH."** 

NOTICE IS HEREBY GIVEN that in several actions instituted by Messrs. GOODALL, BACKHOUSE & CO., of LEEDS, Injunctions have been recently granted by Judges of the Chancery Division of the High Court of Judicature, restraining several persons from using several Counterfeits of Messrs. GOODALL, BACKHOUSE & Co.'s Labels, and in particular against the use of the words "YORKSHIRE RELISH." The sole and exclusive right to the use of which words having been finally established by the above Firm, they will take immediate proceedings against parties manufacturing or offering for sale Sauce under the above title, not being of the manufacture of Messrs. GOODALL, BACKHOUSE & Co.

Information may be given to the undersigned,

J. SEYMOUR SALAMAN,

12 KING STREET, CHEAPSIDE, LONDON,

Solicitor to the Trade Mark Protection Society.

TO INVALIDS

USE

**MOIR'S**  
**SOUPS**

IN 1-lb. and ½-lb. GLASSES.

OX-TAIL SOUP (Clear)  
MOCK-TURTLE SOUP (Clear)  
BEEF TEA,  
CHICKEN BROTH.

**KANGRA VALLEY**  
**Indian Tea Growers' Association,**  
**7 NEW COVENTRY STREET,**  
**LEICESTER SQUARE, W.**

THE distinctive feature of the Business of this Association of Planters is, that the Tea is delivered to consumers in the original One lb. tin-foil lined parcels in which it is packed on the Plantations.

Chemist and Druggist.—"A new agency for tea is offered to chemists and druggists by the 'Kangra Valley Indian Tea Growers' Association,' and the fact that the well-known firm of Barclay & Sons are assisting this association in introducing their teas to the public through chemists is a guarantee that the business is of a serious character then some other of the packet-tea agencies have proved. The Kangra tea plantations lie on the slopes of the North-West Himalayas, and this association appear to take great care in the selection of their leaves, and certainly offer a tea of fine quality. Their teas are packed in pound packets at the plantations, and in that form are offered for sale here in three different qualities."

These Teas, retailing respectively at 4/3, and 2/6, can be purchased in any quantity, either direct from the Store, 7 New Coventry Street, or from Messrs. Barclay & Sons, 95 Farringdon Street, Agents to the Association.

Special Terms granted to all Chemists and Druggists, to whom the Teas, on account of their absolute purity, are particularly recommended.

**CHEMISTS' TEA AGENCY.****WALKER & DALRYMPLE'S**

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

**WALKER & DALRYMPLE'S**

INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

**WALKER & DALRYMPLE'S TEAS.—**

AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, and 160 WHITECHAPEL ROAD, and  
BRADY STREET, LONDON.

P.O.O. payable at head office. Bankers, the National Provincial Bank England.



# ORANGE WINE.

Most suitable for making Quinine Wine because of its containing the least percentage of tannic acid possible, and being in the most brilliant condition. In casks of not less 8 gallons, 4s. per gallon, carriage paid. Extra superior quality (finest made), 4s. 6d. per gallon, carriage paid.

SAMPLES FREE AND CARRIAGE PAID UPON APPLICATION TO

**LAMB & WATT, 46 and 48 ST. ANNE STREET, LIVERPOOL**

CASH OR USUAL TRADE REFERENCES REQUIRED WITH OPENING ORDERS.

First Class Medal, New Zealand, 1882; First Prize Medal, New Zealand, 1883; Cork, 1884.

## PHILLIPS & SONS' DANDELION COFFEE

Castle Square, SWANSEA; 34 Eastcheap, LONDON.

Note London Address, having no connection with a Retail Firm of same name. Established 1760.

## FRY'S MALTED COCOA

(PATENTED).

A Combination of FRY'S Pure COCOA EXTRACT with

**ALLEN & HANBURYS' CONCENTRATED EXTRACT OF MALT**

**J. S. FRY & SONS, BRISTOL AND LONDON.**

## ROBINSON'S ORANGE WINE

(VIN. AURANTII, B.P.)

Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

## THE UNIVERSAL CORN AND WART PENCIL.

1 doz. mounted on a handsome Illustrated Show-Card, Retail, 8d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case. N.B.—The above is exempt from Stamp Duty by permission of the Board of Inland Revenue.

**CONCENTRATED WATERS.**—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopoeia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate. N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopoeia.



Per lb.	Per lb.	Per lb.	Per lb.
Aqua Anethi, Concent. 4/0	Aqua Cinnam. Ver. Concent. 6/0	Aqua Feniculi, Concent. 4/0	Aqua Pimentae, Concent. 4
" Anisi " 4/0	" Cassia " 4/0	" Menth. Pip. " 4/0	" Rose " 8
" Camphore " 4/0	" Flor. Aurant. " 8/6	" Ang. Con. 6/0	" Rose Virgin " 10
" Carui " 4/0	" Flor. Sambuci " 8/6	" Virid. " 4/0	

The above are put up in Bottles of 1lb. or 1lb. and upwards, each of which has the Inventor's Protection Label over cork. Wholesale Agents—Hearon & Co., Maw, Sen, & Thompson, Lynch & Co., London; Evans, Sons & Co., Liverpool; Woolley, Manchester; Bewley & Draper, Hunt & Co., Dublin; Glasgow Apothecaries' Co., Hatrick & Co., Glasgow; J. Mackay & Co., T. & H. Smith & Co., Edinburgh; Foggitt, Thirsk; Goodall & Co., Leeds; J. Richardson & Co., Leicester; Slinger & Son, York; McKesson & Robbins, New York. Special terms for large quantities may be had from

**B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton. Manchester**



# MALTED FOOD

6d. Tins	...	3s. 6d. per doz. nett
1s. „	...	6s. 6d. per doz. nett
2s. 6d. Tins	...	17s. 0d. per doz. nett

These can be obtained direct, or through Patent Medicine Houses  
*Specify Walker's.*

**LABELS** bear Full Directions, *without any name and address*, but with space for Slip Labels. If 1 gross of 6d. or 1s. size, or  $\frac{1}{2}$  gross 2s. 6d. size, be ordered, well-designed Labels will be printed at same quotations with Chemist's own Name and Address.

**T. WALKER**, Manufacturing Chemist, 44 CLOTH FAIR, LONDON, E.C.

SPECIFY WALKER'S.

## IN BULK

40s. per cwt. nett.

This Food is prepared on modern Chemical and Physiological bases.  
REQUIRES NO COOKING, and is reliable in every sense.

## HARVEY'S SAUCE

For FISH,  
STEAKS,  
GAME,  
&c.

**CAUTION.**

Each Bottle of this celebrated Sauce, prepared from the *Original Recipe*, bears the well-known Label, signed—

*Elizabeth Lazenby*

This Label is protected by PERPETUAL INJUNCTION in Chancery of the 9th July, 1858, and without it none can be GENUINE.

Prepared only by **E. LAZENBY & SON, LONDON.**

And sold Retail by Grocers, Oilmen, Italian Warehousemen, &c., throughout the Kingdom.

### SPECIAL NOTICE & CAUTION.

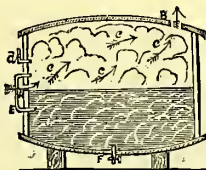
#### BRAND & CO.

The Original Manufacturers of Essence of Beef (green label under wrapper), and other Specialities for Invalids, have

#### NOT REMOVED

From their **SOLE ADDRESS**, No. 11  
LITTLE STANHOPE STREET, MAY-  
FAIR, W, and caution the trade to

**BEWARE of IMITATIONS.**



### NEW METHOD OF MAKING VINEGAR BY THE REVOLVING APPARATUS (Michaelis' Patent).

For further particulars

See the *Chemists' and Druggists' Diary*, 1884, page 274,  
OR APPLY TO

**PAUL ROTHERMEL,**  
105 (late of 27) LEADENHALL ST., LONDON.

### CHUBB'S Best SEIDLITZ POWDERS

—Full Weight—Loose, at 7s. per gross; in lift-off boxes, 7s. 6d.,  
and in hinged boxes, 8s. 6d., per dozen.

### CHUBB'S Extra VIOLET POWDER

(WARRANTED PURE STARCH POWDER),

In 1d. Boxes, 8s. gross, and 2d. Boxes, 11s. gross,  
and in  $\frac{1}{2}$ -lb. and  $\frac{1}{4}$ -lb. Packets, 10d. per lb.

### CHUBB'S Pre- pared FULLER'S EARTH

In 1d. Boxes, 5s. gross, and 2d. Boxes, 9s. gross, and in  
3d. and 6d. Round Boxes, 1s. 6d. and 2s. 6d. dozen.

SUBJECT TO 15 PER CENT. DISCOUNT FOR CASH.

May be obtained through all the Wholesale Houses, or direct from  
**CHUBB & CO., 29 OLD ST., LONDON, E.C.**

SPECIAL QUOTATIONS FOR LARGE QUANTITIES.





# W. H. BAILEY & SON,

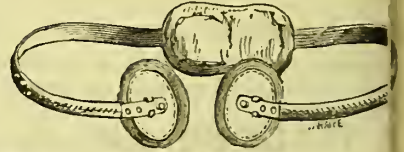
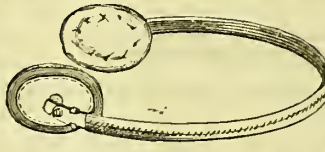
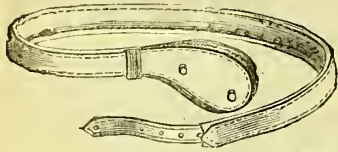
## 38 (late 16) OXFORD ST., LONDON,

Six doors from Hanway Street.

ESTABLISHED A.D. 1833.



FIRST PRIZE (SILVER MEDAL) FOR TRUSSES AWARDED BY THE  
WORSHIPFUL COMPANY OF CUTLERS OF THE CITY OF LONDON, MAY, 18

**TRUSSES.**

Circular Trusses, single, as Fig. 1, basil and chamois or basil and moleskin	per doz.	£1 1 0
Circular Trusses, double, basil and chamois or basil and moleskin	per doz.	1 14 0
Salmon & Ody's Expired Patent, single, Fig. 4	per doz.	1 10 0
Salmon & Ody's Expired Patent, double, Fig. 5	per doz.	3 0 0
Moc-Main Lever, single	each	0 8 0
Moc-Main Lever, double	each	0 13 6
Coles's Expired Patent, single	each	0 6 0
Coles's Expired Patent, double	each	0 12 0
Scrotal Trusses, basil and chamois or moleskin, single	each	0 4 0
" " " " " " " " double	each	0 7 0

**SUSPENSORY BANDAGES.**

No. 1. Cotton Bags and tape under-strings ..	per doz.	£0 8 0
2. Cotton Oxonian, with drawing-strings ..	per doz.	0 10 0
3. Silk Bags and tape under-strings ..	per doz.	1 1 0
4. Silk Oxonian, with drawing-strings ..	per doz.	0 18 0
5. Silk Oxonian Bags bound with elastic ..	per doz.	1 4 0

**SUSPENSORY BANDAGES—continued.**

No. 6. Silk Oxonian, superior quality, bands of buff jean, with drawing-strings ..	per doz.	£1 0 0
7. Silk Bags, to button on, with tape under-strings ..	per doz.	1 10 0
8. " " " " " " " " under-strings to button ..	per doz.	1 0 0

**ELASTIC STOCKINGS, KNEE-CAPS, ETC.**

Manufactured expressly for  
Export, and warranted to stand a  
hot climate better than any others  
in the Market.

	Silk.	Super. Silk.	Cotton.	Super. Cotton.
Stockings .. per pair	£ s. d. 0 10 0	£ s. d. 0 15 0	£ s. d. 0 6 0	£ s. d. 0 7 0
Knee-caps ..	0 6 8	0 10 8	0 4 0	0 5 6
Calf-pieces ..	0 7 6	0 10 0	0 4 6	0 5 6
Socks ..	0 5 6	0 8 8	0 3 10	0 5 6
Wristbands ..	0 2 3	—	0 1 8	0 2 0
Knee Stockings ..	0 16 0	1 5 0	0 9 2	0 12 0
Belts, to draw on .. each	0 16 8	—	—	0 12 0

The above may be obtained direct from the Manufacturers, or from their Wholesale and Export Agents  
Messrs. Barclay & Sons, 95 Farringdon Street.

**UNIVERSAL**

# TUBULAR WATER & AIR BED

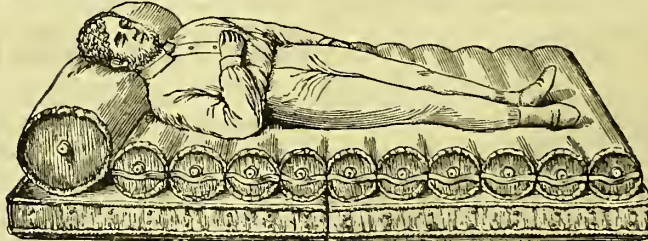
Prize Medals, Sanitary Congress, 1878; Industrial Exhibition, York, 1879; Certificate of Honour, Sanitary Congress, 1879; Brighton, 1881; International, 1881; Kensington, 1882.

## POCOCK BROTHERS

PATENTEES AND SOLE MANUFACTURERS,

**235 SOUTHWARK BRIDGE ROAD, LONDON.**

Consists of a series of separate and distinct cylinders, any diameter and suitable length, made of Waterproof material either for Water or Air, fitting into a case which keeps them side by side, but slightly apart.



ITS ADVANTAGE  
OVER  
ORDINARY WATER  
OR  
AIR BEDS ARE A  
FOLLOWS:—

1. In cost it is less expensive.
2. It is warm and light, and well adapted for a camp or field-bed, being waterproof.
3. It is quickly filled and easily adjusted.
4. It admits of ventilation in the space between the tubes.
5. It can be regulated so as to relieve pressure from any part required.
6. By the addition of tubes it will raise one part of the body higher than the rest.
7. By the temporary removal of one or two tubes it affords room for the introduction of bed-pan.

8. It can be inclined to any angle (even when filled with water) to suit the condition of the patient.
9. It is free from noise and surging, so disagreeable to the invalid changing his position on a water-bed.
10. In case of injury to a tube it can be withdrawn, and a fresh one substituted at a trifling cost, and without loss of time; whereas an ordinary water bed if injured in any part (from being in one compartment) is rendered useless.
11. In the treatment of insane or paralysed invalids who have no control over their evacuations, they cannot lie in a pool of wet, the air passing away between the tubes.



# F. DARTON & CO.,

MAKERS TO H.M.'S GOVERNMENT.

Established  
1834.

45 ST. JOHN STREET, WEST SMITHFIELD.

Established  
1834.

## Darton's Improved Imperishable Index Clinical Thermometers,

As noticed in the *Lancet*, *Chemist and Druggist*, &c., can be obtained only of the Inventors and Makers; cannot get out of order, and are therefore specially suited for Export.

### PLAIN CLINICAL THERMOMETERS,

(Fahrenheit or Centigrade Scale).

4 or 6 in., in case, 3/6 each.

4 in. or 6 in. ditto, contracted in Ebony Case, 4/ each.

If with Magnified Bore, 6/ each.

### DARTON'S IMPROVED DITTO, IMPERISHABLE INDEX, 4 or 5 in., 5/ each.



FIG. 2.

Ditto, Enlarged and Magnified Bore, with lens front, 7/ each



FIG. 2.

One Bent and One Straight 6-inch Clinical Thermometer, in Morocco Snap Case, 10/6 the set.

Kew Certificates, 1/3 each extra.

Thermometers for special purposes made to order at a few days' notice. A large stock of Barometers and Thermometers always on hand.

### BATH THERMOMETERS, Japanned Tin Cases,

Silvered Metal Scales, 8 inches long, 12/ per dozen.

Ditto, Enamelled Tubes, with Dr. Forbes' Specifications, 15/6.

Ebonised Thermometers, with Enamelled Mercury Tubes, 4/6 per dozen.

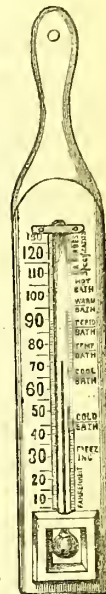
8-in. Boxwood ditto, with spirit tubes, 6/ per dozen.

" " Enamelled Minimums, 15/ per dozen.



### DARTON'S IMPROVED PORCELAIN DAIRY AND

BATH THERMOMETER cannot get out of order or illegible through use, as is the case with the ordinary Bath Thermometer, and is much cleaner for Dairy purposes. 36/ per dozen.



## ELECTRIC BELLS.

New Form Metal Frame Electric Bell, with 2 1/2 Plated Dome, 4/6 each. Complete, with Large Battery, Push Piece and Wire, and Instructions for Fixing, 10/6.

If with best quality bell, 14/6.

Invalids' Electric Bell Set, with Bell and Battery in Polished Case, 30 feet of Flexible Line Wire, and Pear Push, 21/ each.

Invalid's Electric Bell Set, in polished Mahogany Case, with 3-in. best bell. 27/.

New Patent Electric Gas Lighter, 17/6 each.

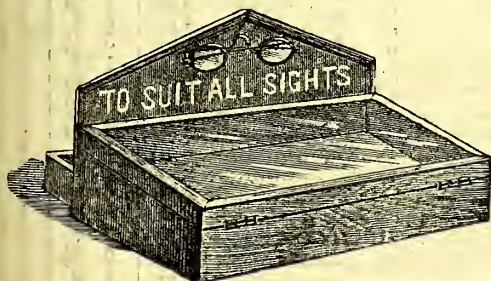
*Estimates given for Fitting up Houses or Shops.*

Magneto Electric Machines, in Pine Case, 9/ and 10/6; ditto in Mahogany, 16/6; ditto, best quality, with plated handles &c., 22/6.

ILLUSTRATED PRICE LIST OF ELECTRIC BELLS AND FITTINGS SENT POST FREE ON APPLICATION.

## SPECTACLES.

For the convenience of Customers who have not yet started the Sale of Spectacles, we fit up Show Cases, containing an assortment of Spectacles, complete with Sight Tester and Instructions, as follows:—



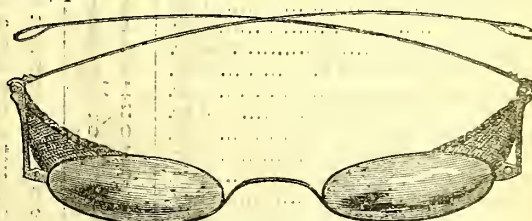
Our £2 2s. SHOW CASE for the Counter, in Polished Mahogany, contains 4 dozen Spectacles, Sight Tester, and Instructions for suiting sight.

Our £3 3s. CASE contains, in addition, 2 dozen Folders and 2 dozen Cases.

Larger sized Cases, in Polished Mahogany or Ebonised, with an assortment of superior quality Spectacles, Folders, and Cases, £6 6s. and £10 10s.

Ditto, with assortment of Best Pebble Spectacles and Folders, £21.

BOWMAN'S GOGGLES, with Neutral Tint, Domed Glasses and Gauge Cups, as recommended by the leading Oculists for weak and inflamed eyes. Best Quality, 78/ per dozen



Cases for ditto, solid leather, 12/ per dozen.

NEUTRAL TINT, "D" EYE SPECTACLES, best quality, 48/ per dozen.

DOMED SPECTACLES, Coloured Glasses, common, 4/6, 8/, and 10/ per dozen.

Ditto, Best Steel Frames, 24/ per dozen.

Ditto ditto, and with Worked Glasses, 30/ per dozen.

Illustrated Price List of Spectacles on application.



# HAYES & CO.'S

## PRICE LIST OF

# "McK. & R." CAPSULED PILLS

In Bottles of 25 and 100.

Messrs. W. HAYES & CO. beg very respectfully to draw the SPECIAL attention of the Wholesale and Retail Trade to the fact that they are now prepared to supply the "McK & R." Capsuled Pills in Bottles of 25 as well as 100. The convenience of this will be at once seen and appreciated. They also announce a CONSIDERABLE REDUCTION in the price of the Quinine Pills, particulars of which will be found on the annexed Price List.

12 Grafton Street, DUBLIN, January, 1885.

NAME OF PILL	Price per Bottle of 25	Price per Bottle of 100	NAME OF PILL	Price per Bottle of 25	Price per Bottle of 100
	s. d.	s. d.		s. d.	s. d.
Aloes Barb., B.P. .... 5 gr.	0 6	1 8	Hydrarg. Iodid. Rub. .... 1.16 gr.	0 7	1 10
" Dilute (Hall's Dinner) .....	0 6	1 8	" " Viride ..... 1.4 gr.	0 7	1 10
" Socotrine, B.P. .... 5 gr.	0 6	1 8	Hydrastia ..... 1.2 gr.	2 2	8 6
" and Assafetida, B.P. .... 5 gr.	0 6	1 8	Ipecac. and Opium ..... 5 gr.	0 11	3 4
" and Iron, B.P. .... 5 gr.	0 6	1 8	" and Squill, B.P. .... 5 gr.	0 6	1 8
" and Myrrh, B.P. .... 3 gr.	0 7	1 10	Iodoform ..... 1 gr.	1 2½	4 6
" " ..... 5 gr.	0 8	2 2	" and Iron ..... 1 4½	5 3	
" and Nux Vomica ..... 0 8½	2 6		Laxative Vegetable ..... 0 7½	2 0	
Aloin ..... 1 gr.	1 4	5 0	Morphia, Hydrochlor. .... 1.8 gr.	0 8½	2 6
" Comp. .... 0 11	3 6		" " ..... 1.4 gr.	0 11	3 4
Anti-Cholera ..... 0 10	2 6		Opium, Powd. .... 1 gr.	0 8½	2 6
Arsenious Acid ..... 1.50 gr.	0 6½	1 8	Pepsin, Pure Concentrated. .... 1 gr.	1 0	3 6
" " ..... 1.20 gr.	0 6½	1 8	Phosphorus ..... 1.30 gr.	1 0	3 6
Assafetida Comp., B.P. .... 5 gr.	0 6	1 8	" ..... 1.50 gr.	1 0	3 6
Calcium Sulphide ..... 1.10 gr.	0 8	2 6	" ..... 1.100 gr.	1 0	3 6
" " ..... 1.4 gr.	0 9	2 6	" and Iron ..... 1 2	4 6	
" " ..... 1.2 gr.	0 10	3 0	" and Nux Vomica ..... 1 2½	4 6	
Calomel, Colocynth, and Hyoscyamus .... 0 11	3 4		" Nux Vomica and Iron ..... 1 2½	4 6	
" Comp., B.P. .... 5 gr.	0 7	1 10	" and Quinine ..... 2 1	8 0	
" and Opium ..... 0 9½	2 8		" Quinine, and Iron ..... 2 1	8 0	
Camphor, Monobromide ..... 2 gr.	1 2	4 6	" Quinine, Iron, and Strychnine ..... 2 1	8 0	
Cathartic Comp., U.S.P. .... 0 7½	2 0		" and Valer. Zinc ..... 1 2	4 6	
Cholera ..... 0 10	3 0		Plumbum et Opium, B.P. .... 5 gr.	0 8½	2 6
Colocynth Comp., B.P. .... 4 gr.	0 10	3 0	Podophyllin ..... 1.4 gr.	0 6	1 8
" " ..... 5 gr.	0 11	3 4	" ..... 1.2 gr.	0 7	2 0
" " and Calomel. .... 5 gr.	0 11	3 4	" Comp. .... 0 11	3 6	
" " and Hydrarg. .... 5 gr.	0 11	3 4	Quinia, Bi-sulphate* ..... 1.4 gr.	0 7½	1 11
Coloc. Comp. and Hyoscy., B.P. .... 5 gr.	0 10	3 0	" " * ..... 1.2 gr.	0 8½	2 4
Conium Comp., B.P. .... 5 gr.	0 6	1 8	" " * ..... 1 gr.	0 10½	2 9
Copaiba and Cubeb. .... 5 gr.	1 2	4 6	" " * ..... 2 gr.	1 4½	4 7
Cro on Chloral. .... 1 gr.	1 1	4 0	" " * ..... 3 gr.	2 0½	6 8
" " ..... 2 gr.	1 9	7 0	" " * ..... 4 gr.	2 7	8 9
Digitalin ..... 1.60 gr.	0 8½	2 6	" " * ..... 5 gr.	3 13	10 10
Ext. Colocynth Comp., B.P. .... 5 gr.	0 8½	2 6	Quinia Comp. .... 1 10	6 3	
Ergotin ..... 3 gr.	1 10	7 0	Rheum Comp., B.P. .... 5 gr.	0 8½	2 6
Euonymin ..... 3 gr.	2 2	8 6	" " et Hydrarg. .... 0 8½	2 6	
Ferri Carb., B.P. .... 5 gr.	0 6	1 8	Salicylic Acid ..... 2 gr.	0 8½	2 6
Ferri et Quinæ Citras ..... 2 gr.	1 0½	3 9	" " Comp. .... 1 2	4 6	
Ferrum Redactum ..... 1 gr.	0 6	1 8	" " ..... 1 9	6 6	
Ferruginous (Blaud's) ..... 3 gr.	0 11	3 6	Soap Comp., B.P. .... 5 gr.	0 10	3 0
" " ..... 5 gr.	0 11	3 6	Squills Comp., B.P. .... 5 gr.	0 6	1 8
Hydrarg., B.P. .... 1 gr.	0 6	1 8	Strychnia ..... 1.50 gr.	0 7	1 10
" " ..... 2 gr.	0 6½	1 8	Zinc Phosphide ..... 1.4 gr.	0 8½	2 6
" " ..... 3 gr.	0 6½	1 8	" " ..... 1.2 gr.	1 0	3 6
" " ..... 5 gr.	0 7½	2 0	" Valerianate ..... 1 gr.	0 10½	3 3
" Colocynth and Hyoscyamus ..... 0 11	3 4				

\* Subject to fluctuations of the Market.

## PRICES SUBJECT TO THE USUAL DISCOUNT.



# Digestive Ferments.

A SERIES OF ARTICLES ON IMPROVED FORMS OF THE DIGESTIVE FERMENTS WILL APPEAR ON THIS PAGE.

## ARTICLE I.

### Extractum Pancreatis.

THIS preparation of the pancreas is the result of a long series of experiments conducted by Dr. Fairchild, and it is upon the basis of facts concerning its properties and behaviour as a digestive agent that we believe justify us in urging it to the attention of the profession. These facts, which we shall set forth, have been already corroborated and utilised in the practice of hundreds of competent physicians throughout the country, particularly in this city; and we believe that every practitioner of medicine who has verified its usefulness will agree with us in the importance which we attach to it.

We know that the Extractum Pancreatis is a substance of well-known and positive action upon alimentary substances, both farinaceous and albuminous. Its action is exerted under such simple conditions that its claims can be quickly subjected to test; that it can be and is made use of in the most practical manner and with great facility in the sick room in the artificial digestion of foods.

It is only within a very recent time that the true value of the pancreatic functions in the digestive process has begun to be generally recognised, and the great availability of the pancreatic ferments for purposes of artificial digestion, and as remedial agents, practically demonstrated.

That view of the pancreatic function, practically limited to its fat and starch digestion, has continued to be most generally accepted. It is true that physiological investigations have long since shown that the pancreas secreted a fluid of most active and varied properties, and proved that these complex functions depended upon the presence of *several distinct principles*, all capable of acting at the same time and under common conditions, *each upon its appropriate alimentary substance*, and upon no other.

This action is not due to *one* ferment of protean properties. Each principle can be (experimentally) separately extracted from the gland, and, when thus isolated, made to exhibit its peculiar action.

But these researches and experiments of the physiological laboratory claim very little attention from the general practitioner, unless they are found capable of some *practical* application, thus adding to the resources of therapeutics, and it is certainly notorious that most of the pancreatic preparations hitherto extant—the so-called “pancreatines”—have been, and are, nearly worthless, so far as representing in any efficient degree the real properties of the gland.

That the pancreas-ferments can be obtained in a potential form, and made to perform all their functions artificially, is now demonstrated in Extractum Pancreatis.

This use of the pancreas for these purposes has only obtained during the last three years, and this addition to the resources of medicine, which has proved of such inestimable service, is largely due to the distinguished authority Dr. Wm. Roberts, F.R.S., and we desire to record our obligations to his most valuable and elaborate researches and experiments upon the digestive ferments and their use for purposes of artificial digestion. Dr. Roberts made original

investigations and observations upon the functions of the pancreatic gland. He was the first to record the fact that the pancreatic juice possessed such great activity in the *digestion of milk*, and he also was the first, we believe, to observe the presence of the milk-curdling ferment in this secretion.

We may here appropriately quote brief paragraphs as summarising Dr. Roberts' statements and the motive-point of his labours, while we shall also have occasion to quote further from the same authority:—

“It must also be borne in mind that the digestive process carried on in the alimentary canal is, strictly speaking, executed on a doubling of the exterior surface, and not in the true interior of the body. If we take all these considerations into account, it will appear, I think, not unnatural that *we should try to help our invalids by administering their food in an already digested or partially-digested condition*. We should thereby only be adding one more to the numberless artificial contrivances with which our civilised life is surrounded.

“My own efforts to produce a palatable peptonised food have been chiefly directed to the pancreatic method. The pancreas excels the stomach as a digestive organ, in that it has the power to digest the two great alimentary principles, starch and proteids.

“Attention has hitherto been too exclusively directed to peptic digestion, which is complicated by the interaction of an acid. Pancreatic digestion is, in this respect, a simpler process, inasmuch as it requires the interference neither of an acid nor an alkali, but is a reaction, pure and simple, between the ferment and the proteid.

“My attention was first turned to the artificial digestion of milk, and I soon found that it was possible, by means of pancreatic extract, to digest this important article of food with comparatively little disturbance of its taste and appearance.

“*Milk contains all the elements of a perfect food, adjusted in their due proportion for the nutrition of the body*. Two out of its three organic constituents—namely, the sugar and the fat—exist already in the most favourable condition for absorption, and require little, if any, further assistance from the digestive ferments. It is therefore obvious that if we could change the caseine of milk into peptone, without materially altering the flavour and appearance of the milk, such a result would go far towards solving the problem of supplying an artificially-digested food for the use of the sick.”

*It was with the distinct purpose of producing a digestive agent of such positive and practical qualities that Dr. Fairchild set out to prepare Extractum Pancreatis from the pancreas.*

It is a fact of the very greatest importance to physicians to know that in this preparation they have a reliable digestive agent which can be *depended upon*, even in very extreme conditions, as an actual resource in the *nutrition of the sick*.

It is within the power of every physician when peptonising food—milk, farinaceous, gruel, &c.—not only to readily determine clinically the value of the peptonised food itself, but is afforded at the same time the most simple and palpable proof of the properties of the digestive agent.

The pure extract of the pancreas, in the form of dry powder, contains all the digestive ferments of the glands, and we shall now proceed to detail and explain, as concisely as may be, *its action* upon various alimentary substances, and append such practical recipes as will render its use perfectly intelligible in the preparation of peptonised food, and facilitate its application by the physician to these purposes.



### DIGESTIVE PROPERTIES.

*First.*—It is capable of digesting, converting into peptone, all forms of albuminous matter, as occurring in the caseine of milk, the white of egg, muscular tissue of meat, fibrine, gelatine, and the gluten and albumen of vegetables.

*Second.*—It digests all farinaceous substances, liquefying and dissolving gelatinous starch, and converting it successively into dextrines and sugar.

*Third.*—It emulsifies fat and oil.

*Fourth.*—It curdles the caseine of milk.

### PEPTONE.

The use of the term peptonise, in conjunction with pancreatic digestion, is somewhat misleading, because peptone is so generally associated with peptic action of the gastric juice. It is by the aid of pepsin that peptone is or has been sought to be produced artificially, consequently we occasionally find that *pepsin* in scales is prescribed for the purpose of digesting milk. Pepsin, however, as will be shown, is *not available for the purpose*. But peptone—hydrated albumen—is a substance at once the *result* of both *pancreatic* and *gastric digestion of albumen*, the *end product* in each being practically the same.

It is in the *condition* under which each secretion performs this function that the distinction lies, and here it is that the adaptability of the ferments of the pancreas for purposes of artificial digestion is revealed.

### GASTRIC PEPTONE.

As is well known, peptic action is characteristically an acid one, although there are still many questions touching the nature, time of secretion, &c., of the acid or acids of the gastric juice. It is its acid nature which proves the obstacle to the employment of pepsin for these purposes in which the pancreas is so greatly useful, for we cannot utilise pepsin for artificial digestion outside of the body, except in the presence of dilute acid solution, the proportions of 1 to  $\frac{1}{2}$  per cent. conceded to be most favourable. The action of pepsin is also slow. It becomes necessary after pepsin digestion to neutralise and separate the acid, to obtain the *peptone* by concentration, evaporation, &c.; consequently the production of these artificial peptones is attained by elaborate chemical operations and manipulations, and has never been applied with any large practical result, peptones being offensive and expensive.

### PANCREATIC PEPTONE.

The ferment of the pancreas which acts upon albumen transforming it into peptone, is called *trypsin*. It is the analogue of pepsin, but, unlike this principle, it exhibits its action either in *neutral, slightly acid, or alkaline* media. There is a very erroneous view current that, as it is so often expressed, "Pancreatine can only act in alkaline solution," and much stress has been laid upon this assertion, chiefly by those interested in the manufacture of pepsin, as an argument against the therapeutic employment of pancreatic ferments. But as we are now treating of facts and uses of the pancreas principles, we will leave the discussion from a therapeutic point of view until we come to consider the use of pancreatic extract as a remedy. It will be sufficient here to advance a most simple and practical refutation of this false premise. To illustrate: *Extractum Pancreatis* has itself an *acid reaction*. Extract the pancreas by maceration in an aqueous solution, and the infusion will have an acid reaction. *Extractum Pancreatis* exhibits its several characteristic actions upon alimentary substances without the presence or aid of any chemical, alkali, or acid whatever, as we will have occasion to show.

As a matter of facility in its application, soda-bicarb. is advised in preparations of peptonised milk, for reasons which will be explained.

### PEPTONISED MILK.

Peptonised or pre-digested milk is conveniently so called because, by the action of the *Extractum Pancreatis* (it *trypsin*), the caseine of the milk is converted into peptone. This change is effected with great rapidity.

The other ingredients of the milk are not at the same time notably acted upon by any of the digestive principles of the pancreas, because, as is readily comprehended, the milk sugar, fat, and mineral salts exist naturally in condition adapted for perfect assimilation.

*Extractum Pancreatis* is capable of digesting milk at temperatures varying from 60° F. to about 140° F. It acts most favourably and **QUICKLY** at a degree of heat a little above that of the blood—about 110° F. If the milk be *quite cold* much below ordinary temperature of a room, it will *not act at all*—simply *remains latent*. If the *Extractum Pancreatis* be added to milk so heated that it *cannot be tolerated by the mouth*, then the *ferments* will be at once *destroyed*—lose all activity.

It is *characteristic* of all the digestive principles or ferments that they are at once permanently destroyed at high temperature, the limit which they endure for practical purposes being that degree at which fluids can be agreeably swallowed.

*Cold* does not so destroy, it *merely checks* or holds their activity in abeyance for an indefinite period, and this *even* at a very low temperature.

We have, therefore, tried to offer a *mean or practical standard* of conditions, whereby it may be conveniently utilised, under which certain *reasonably definite results* may be looked for.

*The action of Extractum Pancreatis upon milk* will be best made clear by its practical use according to recipes herein given: 5 grains of the extract is to be put into a quart bottle with 4 oz. (a gill) of water, and 15 or 20 grains of bicarbonate of soda, and a pint of milk added; then set the bottle aside in a sufficiently warm place for the milk to become and remain tepid or blood-warm. This mixture has all the appearance and taste of ordinary milk, the extract imparting none of its peculiar flavour to the milk.

*So soon as the milk becomes warm, then the peptonising process begins.* The milk gradually assumes a *greyish-yellow tinge*, and the digestion progresses until a *distinct, but not offensive*, bitter taste is developed. This taste is *due* to conversion of the caseine into *peptone*. It is the flavour of the peptone.

If, when the mixture is first made, a little of it should be poured into a glass, and nitric or acetic acid added, cheesy lumps (masses) of curd will at once be precipitated—a very familiar behaviour of milk.

But, as the *peptonising process goes on*, the same test would, from time to time, show *less and less curd*, because of constant diminution of caseine, until, finally, the addition of strong nitric acid even produces no curd, showing the complete absence of caseine—its conversion into peptone.

Nitric acid precipitates the slightest trace of albumen or caseine; it *cannot precipitate peptone*.

It is not necessary to resort to the acid test *in practice*, although very striking in demonstrating the change that has been produced in the milk.

It is a *needless complication*, for the production of the *distinct bitter taste* is a certain *reliable evidence* that the milk is *completely peptonised*. Nor is it necessary, in the great



majority of cases for which it is prescribed, that the milk should be so *entirely peptonised* that the *bitter taste* is *positively developed*, and that it will not curdle at all with acid.

The main thing to be borne in mind and impressed upon the nurse is that this is a *digesting process*, which goes on *continuously* under proper conditions, and that the *time required depends* a good deal upon the *temperature* and the *richness of the milk*. For instance, 5 grains of the extract, used according to the formula, will, in the space of about two or two hours and a half, peptonise a pint of milk in the ordinary temperature of the sick room, *without application of any heat whatever*.

*It is, of course, the indigestibility of the caseine that proves the obstacle in the use of milk, which is so plainly evidenced in the great majority of cases, either in quick rejection of curds, by vomiting, or in the accumulation of cheesy masses in the intestines, and it is only necessary to peptonise the milk sufficiently to the end that these difficulties may be overcome.*

Now, the most practical, convincing, and gratifying test possible is to observe the utility of the peptonised milk when administered in such cases, and we can best determine the degree of peptonising necessary in each case by the facility with which the patient assimilates it—by experience in its use.

Chemists have themselves prepared and sent out day by day quantities of peptonised milk, ordered by prominent physicians of this city, and we have seen a great deal of its use. They find that, as a general rule, it proves perfectly assimilable when it has been allowed to stand warm about one hour from the time the milk becomes tepid. The milk is then at once placed on ice before the *bitter taste* becomes pronounced.

#### PARTIALLY PEPTONISED MILK.

Partially peptonised milk, or milk in which a portion of the caseine is still not completely digested, is best adapted for exhibition in cases of invalids, convalescents, and in infant feeding, where the patient still possesses some activity of digestion, and in such cases the process goes on to completion in the stomach.

Partially peptonised milk will, if a little be tested with acid, give some precipitate, but the curds will be very minute and flocculent, in marked contrast to that of ordinary milk when so treated. It is only in the greatest intolerance of food—as in gastric ulcer, &c.—that it is important to completely peptonise the milk.

The peptonising process can be checked at any stage of digestion and maintained for several hours, during a day, at the desired condition, by simply placing on ice, the moment needful digestion is accomplished; or if ice is not accessible, *scalding* the milk will prevent any possibility of further digestion.

It may then be kept under similar conditions practised for ordinary milk.

But unless the digestion is so checked by chilling or destroyed by boiling, the action goes on to decomposition. The digestive ferment acts under favourable conditions so long as it has anything to act upon, or until it has spent itself.

We are thus so explicit in detailing these facts and conditions because, by carelessness or misunderstanding of them, not only injustice and injury are done us in attributing failure to inefficiency or impracticability of the extract, but great disappointment is experienced by the physician, to speak of no more serious result; for very often, especially in

the first trials, it is in very grave cases that resort is made to the use of this preparation.

The most serious difficulty to contend with has been to provide for the practical employment of the "Extractum Pancreatis" under the instructions of the medical attendant. It is important that explicit instructions should be given.

#### DIRECTIONS FOR PEPTONISING MILK WITH EXTRACTUM PANCREATIS.

##### PRECISE DIRECTIONS.

Into a clean quart bottle put a powder of 5 grains of Extractum Pancreatis and 15 grains of bicarbonate of soda, and a gill of cool water. Shake; then add a pint of *fresh cool milk*.

Place the bottle in a pitcher of *hot water*, or set the bottle aside in a warm place for half an hour, to keep the milk *warm*.

It must then immediately be put on *ice*.

##### EXPLANATORY.

The degree of digestion is very simply regulated by the length of *time* in which the milk is kept *warm*.

When the milk is digested so long that it acquires a slightly bitter taste, it is because the caseine has been entirely digested into peptone. It is the taste of the peptone.

It is very rarely necessary to carry the peptonising to this extent, and should not be done unless so ordered by the physician.

*Partially peptonised milk has no bitter taste*—has, indeed, little *apparent* evidence of any change.

In preparing milk for bottle-fed infants, it is generally sufficient to only slightly peptonise the milk.

*After the contents of the bottle get warm, then every moment lessens the amount of the caseine—the ingredient which is the obstacle to the use of the milk.*

The degree of peptonising necessary in each case is best determined by the readiness with which it is assimilated by the patient.

Great heat destroys, or cold stops, the digestive action.

After either *complete* or *partial* digestion it is simply necessary, in order to *prevent all further action*, to at once place the bottle of peptonised milk on ice. It may then be kept on ice like ordinary milk.

It must be borne in mind that this is not a cooking or chemical process. The object is to subject the milk to the action of the digestive principle (the Extractum Pancreatis) at a *temperature similar* to that of the body.

Always use *fresh sweet* milk.

Peptonised milk may be sweetened to taste, or used for punch, with rum, &c., or made into jelly; also in the preparation of such foods as ordinarily require the use of milk; according to the instructions of the physician.

#### PEPTONISING POWDERS.

*It may here serve a most practical purpose to give illustration of the formula of prescription found generally adopted:—*

Extractum Pancreatis (Fairchild)	..	..	..	5i.
Sodii bicarb.	..	..	..	5ij.

M., ft. chart (waxed paper). No. xii.

Sig.—Add one powder to a gill of water and a pint of milk as directed.

"Send printed directions." (See above.)

The peptonising powders are now supplied in tubes. These tubes are put up in boxes of one dozen, and form the most convenient means for prescribing Extractum Pancreatis for the purpose of peptonising milk.



## PEPTONISING POWDERS IN GLASS TUBES.

EXACT SIZE.

Each tube contains the exact quantity of Extractum Pancreatis (grains 5) and of Soda Bicarb. (grains 15) to peptonise one pint of milk.



EXACT SIZE.

By this means the peptonising powder is supplied in a *accurate* and portable form, secured from deterioration and dispensed at a moderate fixed price.

The Extractum Pancreatis is hygroscopic, and, particularly when mixed with soda, is apt to become sticky if dispensed in powder papers, even when waxed. In these glass tubes the powder may be preserved for any length of time.

This is an especially convenient form for prescribing the peptonising powders for patients travelling by the seashore or in the country.

It is here well to explain the reason for the use of the soda and the water, and this brings us to speak of

### THE MILK-CURDLING FERMENT.

The pancreas contains a true *ferment*, which curdles milk, and which is subject to the same conditions as all the other digestive ferments—to wit: It does not act in the cold, it is active at the temperature of the body, and is destroyed by heat above 160° F. It, when separated, produces the same effect upon milk as does the milk-curdling ferment of the calf's stomach—the rennet. But *as existing in association with the other ferments*, there is a *characteristic difference*. If 5 grains of Extractum Pancreatis are added to a pint of Pure Milk at 100° to 110° F., in a few minutes the milk will begin to curdle softly, and if at rest, *soft, flocculent* curd will gradually separate from the whey; but *simultaneously* the *trypsin* of the extract *sets to work in digesting this curd*; and if kept warm and occasionally stirred with a rod, it will be so flocculent as scarcely to be perceived, and finally quite disappear by conversion into peptone, the milk then being *as fluid as at the beginning*.

If, however, by contrast, we add active infusion of *rennet* to warm milk, a homogeneous jelly-like curd is formed, which separates in mass from the whey, and is utterly *incapable* of digestion by the rennet *artificially*, even if it contain pepsin.

The addition of a gill of water to a pint of milk so dilutes it that the milk-curdling ferment *does not act*, or at least but very slightly.

This is of great practical service in keeping milk *fluid* at all stages of the digestion, and thus *ready* to administer, so that when we wish to use *partially* peptonised milk, we do not have any residuum of curd; but the portion of caseine still unpeptonised, *but held in solution*, may go on to digestion in the stomach. This simple means obviates also all complications and misunderstanding, because the appearance of the curd might lead the patient to fear that 'something was wrong.'

### THE USE OF THE SODA.

If we digest two separate pints according to the formula at the same time, only leaving *out the soda* in one pint, we shall observe no difference either in the time required or in the *result*. The caseine in both will be peptonised, and at any time before digestion is complete both will show the same precipitate with acid. But if we wish to use partially peptonised milk, and so, in order to destroy further action we *boil* the milk in both bottles at any period short of complete digestion, the undigested caseine in the bottle *without* the soda will be at once *coagulated*. The milk containing the soda will remain perfectly *fluid*.

There occurs an *intermediate* substance, called metacaseine, between the caseine and its digested product, peptone. It is this substance which is *coagulated by boiling*. That *pure, sweet* milk is not coagulated by boiling is known to all; neither is completely peptonised milk coagulated by boiling. So this coagulation by boiling is a striking and *peculiar* behaviour of *partially* peptonised milk. The use of the *soda*, then, is to avoid this result, if we desire to boil partially peptonised milk. But where the use of *ice* or *cold* is resorted to, to *check* digestion and *ulterior* changes, the soda may be omitted if it is deemed important to do so.

We have never known any serious objection to be raised

against the soda, and certainly have never heard of any untoward results from it. While its use with that of the water for dilution very much simplifies the directions, it helps to keep the milk "sweet." A small quantity of soda bicarb. is indeed, recommended by Jacobi and others, as well as a common salt, in preparing cow's milk as a substitute for mother's milk.

It will be seen that only when any portion of the peptonised milk is to be kept for a length of time that resort to either ice or boiling is necessary.

### ITS ACTION UPON STARCH.

The pancreatic *diastase* (as it exhibits itself in Extractum Pancreatis) exerts wonderful activity upon starch.

If a few grains of the extract are stirred into a gobletful of thick, well-boiled starch gruel, at a temperature at which it may be agreeably borne by the mouth, the gelatinous mucilage is seen to be quickly acted upon, becoming thinner, and in a few minutes is changed into a perfectly fluid water solution.

The first and very palpable effect is that the starch, which had been swollen and incorporated with the water has become soluble. By longer contact with the pancreatic diastase other changes still ensue, the liquefied and solub starch is gradually converted into the dextrines, and finally into sugar.

The enormous transforming power of the digestive ferments upon the substances, upon which they severally act, is most characteristically exhibited by the diastase, not only in the amount of starch which it is capable of converting into sugar, but in the still vaster proportions of gelatinous starch, which it can so rapidly render soluble and liquefy. The diastase of both the pancreas and the saliva, indeed, thus almost instantly capable of dissolving and dextrinising quantity of starch greater than they have the power to completely convert into glucose, even upon most prolonged contact.

This latter property of the diastase ferment has naturally suggested reflections and observations as to its significance in the digestive process. These intermediate products of starch digestion are sufficiently changed to become in themselves absorbable and transmissible. They have in a lesser degree this characteristic property of glucose and peptone, each of which substance is the result of precisely similar action—essential in effecting the appropriation of both starch and albumen—namely, *hydration*.

That this power of the *Extractum pancreatis* in dextrinising starch may not be without practical suggestion in its application as a remedy may be shown by the following remarks on this subject by Roberts:—

"WHEN CAN STARCH BE SAID TO BE FULLY DIGESTED?"

"Seeing that in the digestion of starch a number of intermediate products are evolved, the question arises, When can the digestion of starch be said to be accomplished?"

"Is maltose the only product absorbed, or are not the dextrines, especially the achroo dextrines, also absorbed?"

"The dextrines, even those coloured by iodine, are highly diffusible, and pass freely through parchment paper in dialysis. In this respect they contrast strongly with starch jelly, and even with liquefied (or soluble) starch, both of which are undialysable."

"It seems not improbable that the lower dextrines are largely absorbed, because, if we follow the history of starch after it has been transformed by digestion and absorbed, we are confronted with the remarkable fact that after absorption the products of starch digestion, or at least a large portion of them, undergo a reconversion in the live into a substance closely resembling undigested starch."

"Glycogen, in its essential features, is an exact counterpart of soluble starch. It forms an opalescent solution in water; it is undialysable, and it is transformed by diastase into dextrine and sugar."

"It appears reasonable to suppose that it would be an advantage to the economy if that portion of our starch food which is destined to be stored in the liver as glycogen should be absorbed at an early period of the digestion because the less removed the digested product is from starch at the moment of absorption the fewer steps it will have to retrace in recovering the amylaceous state after absorption."



And, speaking of these dextrines, the author also says:—  
 "That they are absorbed seems proved (as might have been expected from their known diffusibility), for they have been detected in the blood, and especially in the blood of the portal vein."

"It is certain that hydrated starch, although it may be recognised for a long time in the stomach by its iodine reaction, disappears completely as soon as it enters the upper part of the duodenum."—DALTON.

The interesting theory of Schiff that certain alimentary substances, called by him *peptogens*, have the property of stimulating the secretion of pepsin, also, it seems to the writer, furnishes a strong suggestion in the use of the *Extractum Pancreatis* as a *digestive remedy*. Schiff, in his experiments, pretty conclusively demonstrated that *peptones* and *dextrines* especially, of these peptogens, were potent, either "introduced directly into the stomach or injected into the cellular tissue, or as enemas into the rectum," in provoking the secretion of the proteid-digesting principles, and that no *pepsin* or *trypsin* was secreted *unless these substances were present in the blood*.

It will also be pertinent to remark that the Pancreatic Extract acts directly upon starch, and with great rapidity, without the intervention of alkali, although it (the *Extractum Pancreatis*) is acid to test-paper, and that it acts equally well upon it when made neutral or alkaline.

#### PEPTONISED MILK GRUEL.

This form of peptonised food may be made of equal parts of any *farinaceous* gruel and of milk; arrowroot, flour, barley, oatmeal, &c., will serve for the purpose. In each instance the farinaceous material should be boiled with water until the starch granules have been thoroughly swollen, broken up, and incorporated with the water—arrowroot requiring but a few minutes, oatmeal several hours.

##### RECIPE.

					Pint
Thick, well-boiled, hot gruel	..	..	..	..	$\frac{1}{2}$
Milk, fresh, cold	..	..	..	..	$\frac{1}{2}$

Mix, and when at proper temperature, add 5 grains of the *Extractum Pancreatis* and 15 grains bicarbonate of soda, and allow to stand till peptonised, under same rule as for peptonised milk, both as to making and preserving.

In this way the *diastase* and the *trypsin* act *simultaneously*; the starch at once becomes liquid and gradually transformed, and the trypsin at the same time digests both the caseine and the albuminous substance of the grain.

Or another method may be used.

First, 5 grains of the *pure simple Extractum Pancreatis* are added to *half a pint of gruel separately*, and allowed to stand warm *two hours*; then this peptonised starch gruel is added to *one pint of fresh milk*, and then the powder of *Extractum pancreatis*, 5 grains, and *soda* 15 grains, is to be added under usual directions.

In this latter method additional time and quantity are given for the diastatic action upon the gruel.

Where oatmeal, barley, &c., is used, the peptonised *gruel* should be strained before adding it to the milk.

The *peptonised milk gruel* has a more agreeable taste to many patients than the peptonised milk alone.

It will probably be considered especially desirable in the feeding of infants, particularly of from six months to a year old. It is a resource for purpose of variety also.

#### PEPTONISED MILK JELLY.

Peptonised milk, heated to boiling, one pint.

Dissolve in it crushed sugar, one quarter lb.

Take one half box, small size, Cox's gelatine (about three-quarters oz.); dissolve in a gill of boiling water.

Add to solution of gelatine, juice of one lemon and one small orange.

Use rind for flavour.

St. Croix rum, three or four tablespoonfuls.

Mix these ingredients and strain, and pour into the milk and sugar, after the milk has cooled a little; then put in a cold place. It is not necessary to clarify it if good gelatine is used. Simply strain the mixture of the dissolved gelatine and fruit juices.

Peptonised milk should *always be boiled* before making it into a jelly so as to kill the activity of the *Extractum Pan-*

*creatis*; otherwise it would digest the gelatine and prevent it setting.

PEPTONISED JELLY can be made of any flavour, and with or without spirits, as may be indicated, with any kind of gelatine. The recipe above given simply affords an *example* of what may be done.

#### PEPTONISED MILK PUNCH.

Punch may be prepared from peptonised milk after the same manner as with ordinary milk, except that the use of spirit will not curdle the milk, and *lemon juice, acid phosphate, &c.*, may be freely used without producing curd, if the milk has been thoroughly peptonised. Peptonised punch is not only very *agreeable*, but where both stimulation and nutrition are sought its great value is apparent.

It is in such cases much superior to milk fermented with yeast (*houmyss*), for in this process the caseine is not at all digested.

#### PEPTONISED BEEF-TEA.

Take one quarter lb. finely-minced raw *lean* beef, or same weight (of equal portions) of beef and chicken meat mixed, or chicken alone.

Cold water, one half pint.

Cook over gentle fire, stirring constantly till it has boiled a little—a few minutes.

Then pour off the liquor for future use, and beat or rub the meat to a paste, and put it into a jar or bottle with half a pint of cold water and the liquor poured from the meat. Add—

Extractum pancreatis..	..	..	..	..	3ss.
Soda bicarb.	..	..	..	..	ʒj.

Shake all well together, and set aside in a warm place, at about 110° to 115°, for three hours, stirring or shaking occasionally; then boil quickly.

It may then be strained or clarified with white of egg in usual manner.

Seasoning to taste, if condiments are permissible.

For great majority of cases it will not be required to strain the peptonised liquor, for the portion of meat remaining undissolved will have been so softened and acted upon by the pancreatic extract that it will be in very fine particles and diffused in an almost impalpable condition; thus in a form readily subject to digestion in the body.

FARINACEOUS materials may also be advantageously used in the preparation of the peptonised soup by simply boiling a sufficient quantity of flour, arrowroot, &c., with a *half portion* of the water used in the above recipe, and mixing all together—meat and gruel and peptonising powder. The *Extractum Pancreatis* will, at the same time, digest both *starch* and *meat*.

This has a more agreeable flavour than that made of meats alone.

JELLY also may be made from peptonised MILK GRUEL; precisely the same method as with plain peptonised milk.

#### USES OF PEPTONISED FOOD.

Although we had most sanguine views of the value in nutrition of the sick of these peptonised foods, both upon *a priori* grounds and from the success which the administration had given in crucial cases, still we had no adequate appreciation of the great variety of conditions, ailments not in themselves essentially dangerous, in which the difficulty of assimilation was the most serious complication; nor of the limited resources afforded in such cases.

One of the first serious cases in which it was tested occurred in the Presbyterian Hospital of New York City, seen by Drs. A. H. Smith and T. A. McBride, the visiting physician—a case of gastric ulcer, where the patient had been fed for several weeks per rectum, with constant waning of strength, and emaciation, no food whatever being tolerated by the mouth. Peptonised milk was ordered and administered with success by the mouth, was readily assimilated, and the patient gained rapidly in weight under its free use and upon no other nourishment. Since then it has been used in other similar cases. The use of peptonised milk is of signal benefit in *Scarlet Fever*. In cases of severe surgical operations, the administration of peptonised milk is of great service. In such cases it is not only the best possible means of nutrition after operating, but its facility of assimilation and sustaining



powers peculiarly fit it for exhibition in anticipation of the operation.

Peptonised or partially peptonised milk and other foods have been extensively prescribed as a means of nourishment in a wide range of ailments, in many instances where it has seemed to be the *only food* at command *capable of being assimilated*. Indeed, we have frequently been assured that favourable issue has been clearly attributed to its use, even where fatal prognosis had been made, owing to difficulty in nutrition.

During the progress of and convalescence from fevers, peptonised milk gruel, jellies and milk punches, may be entirely relied upon for purposes of nutrition. It is most clearly indicated and especially valuable in typhoid cases, where the advantage to be derived from the predigestion of the caseine will be at once appreciated.

In a word, peptonised milk and milk gruel may be considered an *ideal food* for the sick. It makes no demand whatever upon the digestive secretions, but *is already in a condition for rapid and complete assimilation*. It is universally available, simply made, economical. It need never be offensive, and in most cases is considered agreeable.

#### FOOD FOR BOTTLE-FED INFANTS.

The very great promise of peptonised milk as a food for bottle-fed infants is at once felt by every physician who for a moment considers its properties. Indeed, it was upon this point that information was much sought, upon the approach of warm weather a year ago, touching its practicability.

While we entertained the most earnest conviction that it could not fail to prove a great and welcome resource in many conditions of infant indigestion, and knew that such cases as it had been tried in had so far demonstrated its value, our claim upon this use of it was necessarily tentative. In this field Dr. Roberts himself had said that he should be glad to see a further trial.

It has now been considerably used in the artificial feeding of infants, and with a very gratifying measure of success in the usual symptoms of infantile indigestion. It has been utilised in a variety of ways, and for infants of from a few days to a year or so old.

There have been cases in which both mother and infant have been nourished for some time almost exclusively on peptonised milk and peptonised milk gruel.

In view of results already had, we feel warranted in strongly commending Extractum Pancreatis to the profession as a means at their command for modifying and adapting cow's milk, by predigestion, to any desired degree, for the *bottle-feeding* of infants, and as a remedy, *per se*, in the digestive disorders of infancy.

It is the indigestibility of caseine that is the source of so much trouble in these cases.

Now, by means of Extractum Pancreatis, we can at will *predigest*, and therefore *diminish*, the proportion of the caseine by carrying the *peptonising* process to *any extent* we find *required* or suggested by experience in its administration.

Obviously, no arbitrary formulæ can be laid down for its use. If the indigestion is very serious—hard, indigestible curds, quickly formed and rejected after feeding, or passed in masses from the intestines, with diarrhoea—then it is best to administer well-peptonised milk, for a time at least, till these symptoms abate; then gradually lessening the time to which we subject the milk to digestion before feeding.

In many cases a slight degree of peptonising suffices to remove all difficulty.

In some cases where there is dejection of hard dry masses with constipation, a few—two or three—grains of the Extract itself, given in a little diluted and sweetened milk—*just before nursing*—either from the breast or bottle—suffice to effect complete digestion; or, in the latter case, it may be added directly to the baby's milk in bottle a short time previous to feeding.

We feel great hesitation in speaking of the remedial use of this preparation, lest we should in this necessarily brief mention of the method most suited to given conditions seem to assume too much a position from a therapeutic standpoint.

It is characteristic of all active remedies that there are certain conditions essential to their action to procure proper effect, and it is equally characteristic of worthless prepara-

tions, and contributes largely to their success (?) that little trouble or intelligence is demanded in their use, and this is especially true of "baby foods" of the day.

It is unnecessary to speak of the inadequacy of these articles as substitutes for mother's milk. The only real substitute is cow's milk, so diluted and sweetened as to approximate in composition to mother's milk. The only justifiable use of these farinaceous foods for *young infants* is in mechanically separating or preventing the hard curd.

This end is better attained (as recommended by Dr. Jacobi in his treatise on infants' food) by the intervention of gum arabic or barley decoction, articles much resorted to by skilful and considerate physicians for this purpose. The indigestibility of farina for infants, and the attendant bad results, are only too notorious.

IN THE PREPARATION OF FOODS FOR NURSING INFANTS it is perfectly feasible to prepare the milk or milk gruel *each time it is used* by setting it to digesting at the necessary interval prior to its requirement; *making it in the nursing-bottle*.

The ordinary nursing-bottles contain 8 or 12 ounces. The recipe may be so modified that each powder shall contain the proper quantity for each feeding. For example:—

#### PRESCRIPTION FOR INFANTS, SAY, UP TO 5 OR 6 MONTHS.

	Gr.
Extractum Pancreatis (Fairehild) .. ..	18
Sodii bicarb. .. ..	48
M., ft. chart (waxed paper). .. .	No. xii.

Sig.—Put one powder into the nursing-bottle with a gill of water, or less, and a gill of fresh milk; keep warm for about *half* an hour before feeding, the time depending upon necessity of each case. Sweeten a little.

#### PRESCRIPTION FOR INFANTS OF 6 MONTHS AND OVER.

	Gr.
Extractum Pancreatis (Fairehild) .. ..	36
Sodii bicarb. .. ..	48
M., ft. chart (waxed paper). .. .	No. xii.

Sig.—Add one powder to a gill of water and  $1\frac{1}{2}$  or 2 gills of milk; keep warm for half an hour or so before feeding.

Where quantity less than a pint of *milk* is desired to be prepared each time, it is only, on prescribing, necessary to write for the Extractum Pancreatis and soda\* to be in proportion of 5 gr. of the former and 10 gr. of the latter to the pint. The quantity of *water* is immaterial to these proportions; as much may be used as thought best.

Many infants are fed on milk so largely diluted as to be insufficient for nutrition, simply to *avoid the curd*. In other cases *whey* is used with the same purpose, but this is certainly a very poor food, except merely for temporary necessity.

In utilising Extractum Pancreatis for infants' feeding, none of these expedients are necessary, nor the use of farinaceous substances, to "keep apart" the curd. We get rid of the excess of caseine by this simple and scientific means—by converting it into absorbable and nutritious food before feeding; thus we are enabled to do away with the use of farina for infants at the age—under six months—in which they have no capacity to digest this food. When it is deemed expedient to re-supply loss of saccharine element incurred by *dilution* of the milk, it is most effectually and simply done by adding a little Kepler's extract of malt.

When the time arrives that farinaceous food is thought desirable, then peptonised milk-gruel may be substituted for plain peptonised milk, by, for instance, in second recipe, adding a teaspoonful of good wheat flour, or other flour, *boiled* with the water before adding to the milk.

To our knowledge infants have been exclusively fed upon peptonised milk for months with most positive success—the degree of predigestion being regulated entirely as circumstances and experience suggested.

\* In peptonising milk for infants, in quantities only sufficient for each feeding, the use of soda is not *essential*, as it is when resort to sealding is required for purpose of keeping the milk. A few grains of pure soda bicarb. will, however, be advisable often, especially in summer, for apparent reasons.



## ARTICLE II.

### CLINICAL EXPERIENCE OF Peptonised Food.

ROBERTS says: "The extreme difficulty of arriving at reliable conclusions in regard to the effect of therapeutical agents is well known to every sober-minded inquirer. The difficulty is not less, but probably greater, in judging of the effects of dietetic means. I have now had a considerable experience, extending over a period of two years, of the use by invalids of peptonised milk and peptonised milk gruel, and it would be an easy task for me to recite a string of cases in which improvement and recovery followed the use of these articles of diet.

"I found that peptonised milk gruel was generally preferred, as being more agreeable to the palate, to simple peptonised milk; and by far the larger number of my observations were made with the former preparation. I was also soon satisfied that, with most rare exceptions, peptonised milk gruel was perfectly acceptable to the invalid's stomach, and that a diet composed exclusively of this article could be used for many consecutive weeks without the slightest sign of failure of nutrition.

"The cases in which the use of peptonised aliment appeared to produce the most striking benefits were those in which complete anorexia prevailed, and those in which the stomach was intolerant of food, and immediately rejected every form of nutriment. A brief review of the results obtained in cases of this kind will, I think, prove instructive.

"*Uremic Vomiting.*—In advanced Bright's disease incessant vomiting is sometimes a distressing and intractable symptom. In some cases of this class I have seen the vomiting cease at once and permanently allayed by the use of peptonised milk gruel. The downward course of the disease may not have been a moment checked, but the relief to the dying patient was great.

"*Gastric Catarrh.*—That form of gastric catarrh which is the Nemesis of alcoholic excess often yields immediately to the use of peptonised food. In the latter periods of cirrhosis there frequently prevails severe intolerance of every kind of food—the stomach rejecting even beef-tea and diluted milk in the smallest quantities. The relief afforded by the use of peptonised milk gruel in some of these cases is most striking—the vomiting ceases almost from the first, and the intolerable sense of distension diminishes.

"*Crises of Cardiac Disease.*—Persons suffering from cardiac dilatation and valvular incompetency usually encounter one or more crises which are susceptible of relief before finally succumbing to their disorder. These crises are marked by a general venous stagnation, with severe congestion of the lungs, liver, and kidneys, and rapidly-rising dropsy. Associated with these symptoms there is, generally, almost complete inability to take food, and sleeplessness. In this condition I have seen marked relief follow the use of peptonised aliment. I have long observed, as I doubt not have many of you, that the condition here described is often alleviated in the most striking manner by the use of exclusively liquid nourishment—such as milk or milk gruel, given in small portions sub-continuously, or sippingly, as it were, throughout the waking hours—the patient never being permitted to take a distinct meal, nor a particle of solid food. As my practice has been to direct, in cases of this class, the administration of the peptonised aliment in this sipping fashion, the gratifying results noted have been partly due to the mode of administration; but I have been convinced by more than one example, when the same liquid nourishment, in the natural and in the pre-digested condition, has been used in succession, that there was a distinct superiority in the pre-digested article.

"*Pernicious Anæmia.*—In the earlier periods of this singular disorder, I am inclined to hope that predigested aliment may prove a valuable resource. In cases where the aliment, although fully declared, was still of comparatively

recent origin, I have, in the last eighteen months, seen the disorder checked under the use of peptonised milk gruel. In one case, owing to the irritability of the stomach, the milk gruel was at first administered per rectum with pancreatic extract, but was afterwards tolerated by the stomach. In three of these cases the amelioration went on to complete restoration. In cases of longer standing I have failed by the same means to obtain the slightest improvement.

"*Gastric Ulcer.*—The use of an exclusively liquid nourishment, given sub-continuously in the manner before indicated, is a well-known and most efficacious mode of treatment in these cases. But since adopting the plan of giving peptonised milk gruel, I think I have perceived that the results were distinctly better than before, especially in cases associated with epigastric pain. The almost absolute rest procured by this food for the ailing organ appeared to be an additional advantage. I may be permitted to mention one case. The patient had suffered from copious and repeated hæmatemesis and from severe epigastric pain. The irritability of the stomach was such that the simplest nourishment, given in the smallest quantities, was immediately rejected. Peptonised milk gruel was, however, tolerated at once; vomiting only occurred two or three times during the first two days of the treatment, and then ceased, as did likewise the epigastric pain. The patient used no other food for a period of six weeks, and took daily from two to three quarts—with steady recovery of flesh and strength.

"*Pyloric and Intestinal Obstruction.*—Peptonised aliment would appear to be specially suitable for use in these cases; but so far I have been somewhat disappointed in the results. The vomiting has generally been effectually controlled; but I have not been able to convince myself, in cases of pyloric stricture, that the fatal event was delayed even a single day. When the obstruction has been temporary, and due to a removable cause, the results have been, of course, more satisfactory.

"I should be glad to see a further trial made of peptonised, or partially peptonised, milk in the gastric and intestinal catarrh of infants. In one severe case of this class a favourable result was immediately obtained; in another case there was greater tolerance of food and more comfort after it than with the use of simply diluted milk. It would be interesting also to have experience of the use of peptonised aliment in typhoid fever and in old age. The greater variety, which can now be given to this form of food by the preparation of peptonised soups, jellies, and blanc-manges, will obviate the monotony sometimes complained of under the continuous use of peptonised milk gruel.

"*Pancreatic Extract as an Addition to Nutritive Enemata.*—Pancreatic Extract is peculiarly adapted for administration with nutritive enemata. The enema may be prepared in the usual way, with milk gruel and beef-tea, and five or ten grains of Extract of Pancreatis added to it just before administration. In the warm temperature of the bowels the ferments find a favourable medium for their action on the nutritive materials with which they are mixed, and there is no acid secretion to interfere with the completion of the digestive process.

"I have now had some experience in this method of alimentation, and have been satisfied with its success. In one case a patient suffering from post-pharyngeal abscess, which entirely occluded the œsophagus, was nourished exclusively for a period of three weeks (until the abscess broke) on enemata of milk gruel mixed with pancreatic extract."

Such is the assimilability of peptonised foods that it will rarely be found necessary to resort to this mode of feeding. When required, the use of *Extractum Pancreatis* (Fairchild) renders this expedient much more successful than it has heretofore been.

#### EXTRACTUM PANCREATIS AS A DIGESTIVE AGENT [Per se].

The more we study the physiology of digestion and become acquainted with the conditions under which the several ferments exert their peculiar power, the firmer becomes our conviction that the pancreas ferments are destined to occupy a position as artificial aids to digestion as prominent as that of pepsin, and as more valuable as their functions are varied.



The multitude of experiments undertaken with the view to arrive at a correct basis for estimating their remedial value have obtained but little attention, nor have they been properly weighed, principally owing to lack of practical interest involved to physicians, for reasons already advanced, and the most crude and captious objections are wont to be asserted, as if they summarily disposed of all claims for the pancreatic ferments as digestive remedies.

These objections to the use of "pancreatine" are to this effect:—

1. "Pancreatine can do no good in the stomach, because it never gets there naturally."

2. "Pancreatine only acts in an alkaline medium; therefore it is useless to put it into the stomach, which is acid."

3. "Pancreatine is destroyed by the gastric juice."

The first fact is, of itself, no argument whatever against the administration of pancreatic preparations; and if we had not heard it urged as an objection, we would not think it worth mentioning. What seems to be implied is that the assumed so serious reversal of the natural order of things must be wrong. It is sufficient to recall that the pancreatic juice is poured out into the intestine only two inches below the orifice of the stomach. If there appears reasonable ground for predicting benefit from this preparation, it is surely of trivial moment if we anticipate by a greater or less interval the introduction of the pancreas ferments into the digestive process, according to the part we wish them to play.

Much stress is laid upon the asserted respective acid and alkaline reactions of the stomach and pancreas secretion, as if they were a sort of reservoirs of fluids of unvarying conditions and activity.

The changes in the digestive acts are not abrupt transitions in which the ferments of each secretion are summarily destroyed by the next upon the field of action; on the contrary, their action is rather intercurent. It is much more reasonable, and, furthermore, borne out by a consideration of the conditions existing, to conclude that each ferment or group of ferments, while *mainly* and peculiarly exerting itself in an appropriate environment or media, still continues its activity beyond until it has finally spent its power, and so gives way to the succeeding function.

This view is certainly only in harmony with the exquisite adaptation of means to the end, as observed in the economy of nature. Therefore, in analogy with the relation of saliva and the gastric juice, we may well conclude, with Prof. Dalton and many others, that the gastric juice, so freely poured into the intestine, and mingling almost at the outlet of the stomach with the *pancreatic secretion*, should act for a time in concert with it.\*

In referring to the properties of the pancreas ferments, we spoke of the fact that our *Extractum Pancreatis* (Fairchild) has itself an acid reaction, as at once refuting the assertion that they can act only in alkaline media. We have thus already shown that false premises have been made the basis of erroneous deductions in reference to the properties of these ferments; and we shall have occasion to still further demonstrate this when we come to show the grounds upon which it has been claimed that the pancreas ferments are valueless when given by the stomach.

All we know—that is, demonstrable—bearing upon this point is derived from a study of the exact condition governing the behaviour of the ferments *artificially* upon alimentary substances, and by subjecting the digestive *secretions* or their *ferments* to *action upon each other*.

These are the experiments upon which the assertion that the pancreas ferments cannot be advantageously given by the stomach are based.

A mixture of pepsin, acid, and water is prepared precisely as we should proceed to make artificial gastric juice in the test for pepsin. The pancreas ferments are macerated in this acid-pepsin solution for several hours at a temperature

of 100° Fahr. After then neutralising the acid, we find upon trial, that the activity of the pancreatic ferments is destroyed.

The pancreas ferments have also been subjected under the same conditions to the action of healthy natural gastric juice obtained from the stomach, with the same results.

When we subject *saliva* to the same experiments, we find its activity is also destroyed.

What weight have these two experiments described in determining the value of pancreatic ferments as digestive remedies?

How nearly do these conditions imitate those of the natural process of digestion? They bear analogy only to the normal degree of activity in *full digestion* in health.

Even here there are very essential points of difference which have an important bearing upon the question.

First, in these experiments the pancreatic ferments are subjected to the *full degree* of digestive activity from the *outset* to the *end* of the process.

In healthy stomach digestion this condition does not obtain. We know that the gastric secretion varies in quantity, character, and activity during the entire period of digestion; that the secretion only gradually reaches the maximum intensity, then lessens, till, its functions having been exhausted, there succeeds an interval of complete inaction.

This fluctuation is true as regards the secretion of the acid.

That the real acid of digestion is not free hydrochloric seems clear. It has not the same reaction; the acids of *digestion* are thought to be the organic acids set free from the food.

In the stomach the pancreatic ferments, when given during digestion, as in *Extractum Pancreatis*, for instance, are not so suspended in *copious pure* gastric juice. There is always the *presence of food* necessary to the secretion of the gastric juice. This mingles with the fluid, absorbing it, and neutralising its acidity.

"The simplest investigation shows that gastric juice does not accumulate to any considerable amount during digestion, but that it is gradually secreted so long as any food remains undigested; each portion, as it is digested, being disposed of by absorption, together with its solvent fluid."—DALTON.

When we subject *Extractum Pancreatis* (Fairchild) to the action of pepsin and acid in a bottle at 100° Fahr., *without presence of food*, we have both the stomach and pancreas ferments in an acid solution. Now, the pepsin finds here all the conditions essential to its *highest activity*. The material or substance of all these ferments is some peculiar form of albuminoid matter. The pepsin therefore sets to work to digest the *Extractum Pancreatis* as it would any other albuminous substance. This is just what we should expect; it is a foregone conclusion. Whether the *Extractum Pancreatis* meanwhile, before it is extinguished exerts any effect upon the pepsin, is a question which requires more experiment than any practical point involved would justify.

These experiments by no means demonstrate the inutility of the pancreatic ferments as digestive remedies. It is not in healthy digestion that we seek to administer these or any other digestive agents.

When purely peptic digestion is at fault, we have a veritable active *pepsin* a trustworthy resource—among others.

There have been a great many experiments made of similar character to these already detailed, undertaken with the same object; and we could easily array a number of eminent authorities who, after such investigations, assert that the pancreatic and salivary ferments can preserve their properties intact in the stomach in full digestion.

But, touching the question of the remedial qualities of preparation as based upon its actual or asserted *properties*, we prefer only to adduce such views as have proved most tenable, and which we have verified by investigations which possible in our own province.

That the pancreas ferments are merely held *dormant* or *inert* in the stomach and recover their activity undiminished

\* "By examining in this way from time to time the intestinal fluids, it becomes manifest that the action of the gastric juice is not confined to the stomach, but continues after the food is passed into the intestine. Its [the pancreas] secretion thus enters the intestines, and mingles with the substances undergoing digestion, almost immediately after they have passed from the stomach into the duodenum."—DALTON.



in the duodenum, we do not believe is a correct view of the subject. This view is advanced by experimenters who seem to have taken into consideration only the *acid* property of the gastric juice, and have found the pancreas ferments to exhibit their activity after having been subjected to the action of dilute acid solution. We may properly speak of the pancreas ferments as being dormant or inert at a low temperature; we may so speak of the trypsin in the presence of starch, and of the diastase in contact only with albuminous substances; but this does not clearly express the situation when we wish to study the action of these ferments in the stomach, nor of the action of the stomach upon them. In the gastric juice there is the essential ingredient *pepsin*; and the gastric juice is poured out under the stimulus of *food*. Now, there is, we think, good ground to believe that the normal gastric juice is in some degree destructive to these ferments; but it is also certain that there are intervals during the digestive process which offer favourable opportunity for their action upon aliments.

So, when we give Extractum Pancreatis during digestion, there is both an action upon food and an action of the gastric juice upon it.

The various expedients afforded—including pharmaceutical ones—are not to be overlooked as increasing the possibilities of successful administration.

What we wish to ascertain is, what action EXTRACTUM PANCREATIS can exert upon food in the presence of the gastric juice, under conditions of average activity during the gradations of the process; and what ground we have for believing that we may carry the pancreatic ferments so intact *through the stomach* that we may secure their aid in *intestinal* digestion, and the best means of administering Extractum Pancreatis to secure this end.

We shall then have still stronger suggestion and justification for its use in *disorders* of digestion. We have made all practical experiments possible in relation to the properties of the digestive ferments, and especially undertaken many which seem to have practical value in determining these questions of such great therapeutic interest—namely, touching the concurrent action of the pancreatic and gastric ferments upon food with which they are mingled, and as to the best expedients for administration of the Extractum Pancreatis, for its several purposes.

Without going into the technical details of the many experiments with the digestive ferments which we have made, such details and tables of experiments often being more confusing than otherwise, we shall try to state as briefly and simply as possible that which is pertinent from a practical standpoint to the physician.

We find that the Extractum Pancreatis exhibits activity upon gelatinous starch when this is made slightly acid with both hydrochloric and lactic acid, and with natural gastric juice. To very thick gelatinous starch was added, and thoroughly mixed, fresh gastric juice\* (obtained from the stomach of a dog during digestion), in sufficient quantities to make the mixture of a decided *acid* reaction. The starch was very quickly liquefied by the Extractum Pancreatis.

Extractum Pancreatis is capable of exerting its tryptic action under a range of weak acidity, and with various acids. It dissolves egg albumen in mixture acidulated with hydrochloric acid, in the proportion of the normal gastric juice—2 parts per 1,000—using the same relative parts of albumen to the acid solution employed in testing pepsin: egg, 1 part; acid solution, 5 parts.

When mixtures of this proportion of albumen, acid, and water are subjected to the action of pepsin and of Extractum Pancreatis separately, the contrast is apparent; not only does the trypsin digest the more albumen, but the portion remaining undissolved is very much softened; and, if allowed to deposit in the vial, it will be seen at the upper layer to show an almost gelatinous condition, the particles of egg undissolved by the pepsin showing very little evidence of change, the particles being unsoftened, and showing the same sharpness of outline as at the beginning.

When the same mixture of albumen and acid solution is subjected to the action of pancreatic extract and pepsin

together, there is the same evidence of the digestive action of the Extractum Pancreatis, as compared to that of pepsin alone in the same mixture.

In many trials of the action upon coagulated albumen of Extractum Pancreatis, together with pepsin and acid solution of the percentage of acidity of normal gastric juice, and of Extractum Pancreatis mixed with the gastric juice of the dog, as compared with the action of pepsin and gastric juice, separately, we find that the trypsin is capable of exerting considerable activity under these conditions. This was not only ascertained by observing the digestive process as it is exhibited in the effect upon the albumen, with which we become very familiar by experience, but by careful estimates of actual weight digested.

In many digestions of albumen in slightly acid solutions (of various strengths of acidity), with pepsin and pancreatic extract separately, and carried on at the same time, it seemed proved that in spite of the fact that pepsin digestion is essentially acid, still there are conditions of weak acidity in which pepsin exerts very diminished activity, but which are in some degree suitable media for tryptic action while trypsin also acts in alkaline or neutral media. It digests albumen in mixtures with lactic and with acetic acid with 2 parts per 1,000. It is evident that this proportion will not be constant during the digestion, some of the acid uniting with the alkalies of the albumen and other acids set free. But there will be maintained a decided acid reaction throughout the process.

Extractum Pancreatis (Fairchild) converts albumen into peptone by itself, in slightly acid, alkaline or neutral media.

In the course of digestion, in these experiments with Extractum Pancreatis together with pepsin, and with gastric juice, portions of the contents of vials were taken out at various intervals, neutralised and tested for pancreatic activity, both upon starch and milk. There was found evidence of loss of activity in varying degree, according as the acidity of the mixture was favourable to the action of the pepsin, and to the length of time it was subjected to digestion.

The practical deduction is that there is opportunity in the stomach for a sensible and probably very salutary action of the pancreatic ferments, especially in view of the more favourable conditions offered in the stomach, as shown by comparison of digestion in a bottle and in the stomach.

Upon consideration of the facts herein adduced, and upon inference drawn from our knowledge of the *natural digestive process*, we shall see that even in *ordinary* activity of the stomach digestion there are *gradations* in which it is quite justifiable to look for good results from the exhibition of *Extractum Pancreatis*.

The further the conditions depart from the normal standard of peptic activity, the less we need consider this influence in its use.

Certain it is that there are failures of digestion in which there are the clearest indications for the use of Extractum Pancreatis, and in which by due selection of time and method this may be so prescribed that little interference of the gastric secretion may be taken into account.

It is not possible to conceive of any degree of *healthy* digestion so active that the Extractum Pancreatis given with the meals could be *destroyed* in the stomach before it would be able to accomplish at least the *liquefaction* or disintegration of gelatinous starch or masses of *starchy food*, and at the same time exert a considerable influence upon albuminous substances.

For purposes of physiological demonstration the secretions of the stomach and the pancreas obtained at the height of digestion are used. But we do not obtain digestive ferments from gastric or pancreatic juice. They are obtained directly from the secreting glands, the reserve store in these cells.

Now, when we see the range of conditions under which these ferments can act artificially, that there is a corresponding scope of activity in the natural digestive process, the inference is as plain that we have in Extractum Pancreatis (Fairchild) a remedy of most important activity when used according to proper indications, especially when we have afforded so many expedients both in *method* and *form* of exhibiting this preparation.

\* The gastric juice used in these experiments was obtained from a dog with a gastric fistula, maintained by means of a spool canula, the fistula having been made in the usual manner several months since, and the dog giving every evidence of perfect health.



## EXTRACTUM PANCREATIS AS AN AGENT IN THE INDIGESTION OF STARCH.

Extractum Pancreatis is of great benefit in the faulty assimilation of starch, in compensating for deficiency of *diastasic* action either of the saliva or pancreas, or of both.

We know beyond question that the diastase of each of these secretions behaves under common conditions.

There is every ground for the inference that the salivary diastase continues the digestion of starch in the stomach for a time, in order that this food may undergo adequate solution, in its conversion with albuminous substances, into chyme, and all the experiments and physiological observations which have been made conclusively support this belief.

If Extractum Pancreatis is given at the beginning of a meal it must certainly produce very material action upon *starchy* food, even in healthy activity of stomach digestion. The amount of tryptic digestion it may accomplish at the same time, depending upon the character and activity of the gastric secretion. We may safely assert that when given at meal time the diastase of the pancreas will find as much scope of action as is afforded to that of the saliva.

Thus in cases of defective dentition it proves a valuable resource, and where lack of salivary action is complicated by gastric indigestion, as in old age, then the happiest results may be rationally looked for from the administration of Pancreatic Extract (with the food), combined with pepsin in scales, and if also indicated, following with a few grains of the Extractum Pancreatis at such interval after stomach digestion (from one and a half to two hours) as may insure its aid in *intestinal* digestion.

Its diastasic action may also very simply and effectually be utilised by adding a few grains of the Extract to the farinaceous dishes given to invalids and young children, oatmeal, gruels, bread and milk, puddings, &c. It is only necessary to add it to the food a short time before eating. It imparts little evidence of its presence, and for children, if added without their knowledge, will not be detected. Of course care should be taken about the temperature at which it is added.

Recently much attention has been drawn to Extract of Malt as a source of diastasic activity, and it is conclusively shown that Kepler Extract of Malt possesses most remarkable digestive power.

The *Lancet* says it is "The best known and the largest used Extract of Malt. It is as distinct an advance in therapeutics as was the introduction of cod-liver oil. It is one of our best remedies for atonic dyspepsia, and is undoubtedly useful in consumption and other wasting diseases."

## INTESTINAL INDIGESTION.

Here is the field *par excellence* for the administration of Extractum Pancreatis, both as concerns the peculiar indication and the necessity for its use. We have practically no remedies of known directed action upon the pancreas—saving that ether has been recommended to stimulate the assimilation of fats. In this disorder, especially when chronic, pepsin alone has but little effect, and only to the extent by which, in aiding the peptic process, it relieves the pancreas of some excess of work.

By giving, say 5 grs. Extractum Pancreatis after the stomach digestion has been mainly accomplished, and the chyme has passed into the intestine, we may justly conclude that the pancreas ferments will complete the digestion of starch begun in the mouth, and of albuminous substances which are only at the best very *partially* peptonised in the stomach.

It is well to give the Extract in such cases filled into capsules, or in the PANCREATIC TABLOIDS, and taken with a draught of water to facilitate its passage.

It may be given with *soda bicarb* in these cases, but, as a rule, it has given excellent results alone. In cases of marked acidity, naturally the soda would be an advantage. It has proved of most positive and permanent benefit in intestinal indigestion of the severest and most persistent kind where there is flatulency, distress, and distension appearing at intervals of an hour to two hours or more after food. In some cases relief is at once experienced, but it is generally

necessary to continue its use for some time in chronic cases (as they generally are) before the patient can altogether dispense with its aid. There is no better nor more important test of the therapeutic value of *Extractum Pancreatis* than in cases of intestinal indigestion, and its trial here is invited with confidence that in well-selected cases its judicious use will certainly be beneficial.

As this disorder is so generally associated with (the sequel to) stomach indigestion, in addition to doses of the Extract taken at *end of gastric action*, it is often serviceable to give either pepsin in scales or Extractum Pancreatis at beginning of meals.

In many cases of indigestion of children and infants, as well as in ailments where difficulty is experienced in digestion of milk, starch, &c., the simple addition of the Extract to these *foods*, or the administration of the Extractum Pancreatis *per se* at time of feeding, is quite sufficient to relieve all trouble.

It is only where the stomach at once rejects contents, or where indigestion produces very serious results, and in cases in which it is undesirable to make any demand upon the digestive functions, that it is necessary to resort to artificial digestion. Then in peptonised food we have a sure resource.

In the clinical experience of Extractum Pancreatis, as a *digestive remedy*, the anticipations based upon its *properties* have been complemented by *results* such as to afford the strongest proof of its value, and we know it to be growing in favour, upon use, with many physicians, who have become convinced that it is capable of producing much benefit when properly used.

## FORM OF ADMINISTRATION.

### DOSE; COMPATIBILITIES OF EXTRACTUM PANCREATIS.

When its aid is desired in the beginning of digestion it is best given in powder (4 or 5 grains) alone, or combined with bismuth subnitrate,\* &c., as indicated with a draught of hot water which facilitates its action.

When it is desired to carry the extract into the duodenum it is best given one or two hours after food, in a pill, in the very agreeable *Pancreatic Tabloids*, and washed down with water.

When prescribed in powders it should be dispensed in waxed papers or foil. It is in some cases advantageously combined with aromatics, powdered cubebs, ginger, pulv., aromat., small doses of ipecac., which act as adjuvants, and allay any tendency to nausea. It is sometimes combined with bismuth and charcoal in capsules, and with *soda* in capsules. It is in every respect compatible with salts of bismuth.

The extract is not freely soluble.

When (for illustration) it is added to starch mucilage or to milk it does not *dissolve* in these, but it acts upon them. The activity of the digestive ferments does *not at all depend upon solubility* (in the ordinary sense of the term); their energy becomes apparent, is at once exerted upon food under appropriate conditions of warmth and moisture.

In the practical uses of the pancreatic ferments Dr. Roberts speaks of various liquid extracts, or *liquors* from the gland, which he used in the preparation of peptonised foods. We *originated* and devised the *dry extract* in the form of powder, which seemed to us to be the best possible product from the gland for many reasons. Its superior advantage will be readily perceived, the liquor being a bulky and very expensive preparation, much subject to deterioration, requiring considerable proportion of alcohol—about 25 per cent.—to preserve it, and which otherwise serves no useful purpose, but adds largely to its cost; while for uses as an agent *per se*, the concentrated dry "Extractum Pancreatis" affords better facilities of exhibition.

Five grains of our *Extractum Pancreatis* is equal to two or three *teaspoonfuls* of the *liquor* in all cases where that is mentioned in above cited formulas, being *quicker and less variable* in its action.

Milk peptonised with *liquor Pancreaticus* is decidedly less agreeable than that made with Extractum Pancreatis.

\* See Compound Pancreatic Tabloids.



## PANCREATINE AND PANCREATINE PREPARATIONS OF THE MARKET.

In speaking of the use of artificial digestive agents, Dr. Fothergill says:—

"After this review of the digestion of the different ingredients of our food we can see the digestion of

"Starch by saliva and pancreatic diastase;

"Proteids by pepsin and trypsin;

"Fat by pancreatic secretion,

will lead us to the *proper and exact* use of artificial digestive agents; about which at present the wildest confusion obtains, both by the manufacturing chemists and the profession generally."

That this assertion has in relation to the *first* class been well grounded is most evident, when we consider the sort of digestive preparations extant, some of which are so severely criticised by Fothergill.

All our knowledge of the digestive functions and the digestive ferments clearly teaches that the artificial preparations of the several digestive secretions should be made and furnished separately to the physicians in their purity, in order that they may be employed singly or combined, as conditions justify; the importance of differentiating these indications being no less clearly emphasised. So used, the physician is enabled to form a just estimate of their value. While certain approved combinations may well be furnished by the manufacturing chemist in a staple and desirable form, no one arbitrary mixture, even if it should really contain active ferments, can be devised suitable for all cases. The character of the pancreatines and "pepsin and pancreatine" compounds both saccharated and liquid, hitherto made, have been such as to engender little respect for the remedial value of the *pancreas* ferments; except in some cases where compounds have been strongly urged upon the profession as *superior* to *pepsin alone*, on account of the *asserted* combination with it of both pancreatine and diastase, and effects produced, consequently attributed to this association.

The prototype of these saccharated compounds, and the several imitations, exhibit *little or no action* characteristic of either the *pancreas* or *saliva*; and the conclusion is inevitable that the good done by these preparations is *due* to the *pepsin* and *acid* which they do contain.

The absurdity of the claim of one of these saccharated mixtures that it contains all of the agents of digestion, "combined in same proportion as they exist in the human system," is apparent. The physical properties of the "*pancreatines*" of the market are in themselves sufficient evidence of the "*high dilution*" the digestive principles have undergone, even if any true pancreatic ferment was ever produced in the beginning. They are *white, sweet, almost free from sensible properties* of the pancreatic ferments.

It is just to say here that none of these pancreatines have claimed anything but emulsifying properties. It is only the "*pepsin and pancreatine*" compounds that claim to digest *all kinds of foods*, starchy and albuminous, owing to the additional presence of the pancreatic principles—still further fortified by *ptyaline* or *diastase*.

The test for the activity of these preparations is very simple. If they contain *diastase*, either of *pancreas* or *saliva*, they should quickly liquefy gelatinous starch\* by stirring into it at the proper temperature a little or *much* of the article.

If they contain also *acid*, and *this* is thought or claimed to be the reason why they do not exhibit this behaviour upon starch, just make it alkaline with a little soda bicarb., and then try it. If mixtures of pepsin, pancreatine, and diastase, and *acid*, do not act upon starch *because* of the *acid*, it affords a curious reason (?) for its presence. To make these mixtures quite perfect and logical (?) soda also should be an ingredient. Pepsin cannot digest caseine or any albumen in alkaline mixture. Trypsin, the pancreas ferment, can—must do so. Stir a quantity of any of these mixtures into a little water, and make *alkaline* with soda, and then add to milk,

and see how long (and how much) it will take to digest the caseine at 100° F. If they represent, in any active degree, the pancreas, they must so digest milk.

Speaking of these digestive mixtures, Dr. Fothergill remarks that "this compound, or rather 'jumble,' to be taken at any time the patient prefers, is a marked illustration of what is written above as to disregard of time and place of the portions of the digestive act."

These formulas are not only directly in the face of all accepted facts and theories of the digestive process, but, still worse, are offered also in combination with a variety of elixirs, wines, &c., containing alcohol, acid, astringents, styptic salts of iron (as, to instance, mixed with elixir phosphates, iron, quinine, and strychn.), without any regard to *delicate chemical and physiological relations* of these digestive ferments—mixtures absurd, not to say impossible.

Pepsin and pancreatine can be mixed dry without any occurrence of action upon each other, but *liquid acid mixtures* (however called) of these ferments are quite incompatible. They will not be found to contain any active pancreatic principle, even if such were once contained in them. In fact, the elixirs, wines, &c., of pancreatine have practically no digestive value. Of such of these preparations as we have met with in the market, we have never found one to possess the slightest activity upon starch or milk. We prepared *active* solutions of both pancreas and stomach (the peptic with usual quantity of acid, and pancreas in simple water and spirit), and mixed them in equal proportions, and set on shelf in ordinary indoor temperature for several weeks. Upon neutralising the mixture, and testing upon starch and milk, there was found to be no trace of *pancreatic* action; comment is unnecessary.

The activity of both the solutions was carefully verified before admixture.

It seems bad nomenclature, in the light of our present knowledge of the pancreas ferments, to use the word pancreatine, as we do pepsin in relation to the gastric juice, for by analogy and by acceptance, it means *one* principle, when we know there are several.

The pancreatines are not only saccharated, or otherwise sophisticated, but in other respects they totally differ from *Extractum Pancreatis*.

We respectfully urge upon physicians the importance of writing for "*Extractum Pancreatis*" (Fairchild) when desiring this preparation.

When "pancreatine" is written there is a risk of substitution, and in this event disappointment will, to say the least of it, surely follow.

UNIVERSITY OF THE CITY OF NEW YORK.

MEDICAL DEPARTMENT.

January 31.

Gentlemen,—

I have examined the six makes of "Pancreatine"—all from well-known houses—and *Extractum Pancreatis*, as requested by you, in the original packages.

From my analysis I would say, that the *Extractum Pancreatis* (Fairchild) is, in peptonising action upon Milk, and in diastatic activity, greatly superior to *all* of the other products, four of these being quite devoid of both amylolytic and proteolytic power.

Very respectfully,

R. A. WITTHAUS, A.M., MD.,

Prof. of Physiological Chemistry, University of N.Y.,  
and Prof. of Medical Chemistry, University of Vermont.

BURROUGHS, WELLCOME & CO.

SNOW HILL, LONDON.

(To be continued next month.)

\* Boil small tablespoonful of starch with gobletful of water, stirring continuously.



# THE NEW "A 1" COD LIVER OIL.

SEASON  
1885.



SEASON  
1885.

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See "CHEMIST AND DRUGGIST," December 15th, 1874.

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THE CHEMIST AND DRUGGIST is supplied regularly by arrangement with their respective Councils to all members of the following societies:—

The Pharmaceutical Society of Victoria.

The Pharmaceutical Society of New South Wales.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of New Zealand.

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Last month we announced that THE CHEMISTS' AND DRUGGISTS' Diary for 1885 was out of print, but that, for the convenience of new subscribers and others, we had reproduced the Treatise on Dispensing in a neat little book, which we offered, to subscribers only, at 1s. per copy, or 1s. 2d. post free. Some chemists have inquired rather angrily why we should limit the sale of this treatise to subscribers. The explanation is very simple. If we sell all we have printed, as doubtless we shall, our profit will be quite trifling. Anyone who should try to prepare and print such a book *ab initio* would find it necessary to sell it at 5s., if the enterprise were to bring any fair pecuniary reward. The only benefit we can look for to pay for our trouble in the matter is an extension of our subscription-list. We may add, however, that anyone can get a copy, while the edition lasts, by ordering through a present subscriber.

Copies of the next issue of THE CHEMIST AND DRUGGIST (March 15) will be sent to all merchant shippers in the United Kingdom who at any time export drugs, chemicals, druggists' sundries, medicines, medical stores, oils, paints, and drysalteries.



The Pharmaceutical Council have read their proposed new by-laws a second time, after some opposition from Mr. Greenish, who objected to the method proposed for the division of the examination.

The Registrar's report, up to December 31, 1884, shows that on that date there were 13,400 names on the register of chemists and druggists. This was 265 fewer than a year previously, but the reduction is chiefly accounted for by the fact that 374 names had been removed by the purging process prescribed by the Pharmacy Act. The total number of new names added during the year after examination was 328, which can hardly suffice to keep up the normal number of chemists and druggists.

The total strength of the Pharmaceutical Society is returned at 5,180, including 1,156 apprentices and 834 associates not in business.

The Irish Pharmaceutical Council propose to form a limited company to provide a School of Pharmacy and Chemistry in association with the Society.

Among our Australian news this month will be found some interesting facts furnished to us verbally by Mr. F. S. Grimwade, of the firm of Felton, Grimwade & Co., of Melbourne.

A translation of the official announcement respecting the International Pharmaceutical Congress to be held at Brussels in September next is given on page 73.

Professor Redwood has visited Birmingham, and has given a very clear exposition of the changes proposed to be made in the pharmaceutical requirements for examination, and the reasons therefor. His speech was given as an address inaugurating the new pharmaceutical classes established by the Midland Counties Chemists' Association.

The lecture hall of the new Chicago College of Pharmacy has been designated "Attfield Hall," in recognition of the service rendered by Professor Attfield in raising a subscription in this country towards rebuilding the college after the fire in 1871.

The Chemists' Ball held on January 14, although in all respects very enjoyable, seemed to show some indications either of external bad times or of internal decay. There was a decidedly thinner attendance than usual, and we understand only 270 tickets were sold. The slightly reduced sum of 25% net profit has been handed over to the Benevolent Fund of the Pharmaceutical Society. The Junior Pharmacy Ball, which was held at the Freemasons' Tavern on February 4, was unusually successful, about 470 ladies and gentlemen taking part in it.

In this number will be found a series of pages inserted among our advertisements by Messrs. Burroughs, Wellcome & Co. These pages present a clear and carefully-written explanation of the quite modern system of peptonising various foods, so as to render them immediately assimilable by persons of the most delicate digestive powers. It seems to us that in publishing this information in so complete a form Messrs. Burroughs, Wellcome & Co. do a direct service to pharmacists. The suggestion to supply the extractum pancreatis to add to infants' milk food or to milk and milk compounds for invalids, opens a prospect of a very extensive field of new business, which would be not only profitable to the pharmacist, but, at the same time, beneficial to the public.



## Pharmacalia.

### TRANSPARENT CEMENT.

A FRENCH authority gives the following recipe for transparent cement, specially adapted for china and porcelain. The advantage claimed is absence of the slightest yellow tinge, so that the addition of the cement is imperceptible, while it possesses an extreme degree of tenacity:—

Mix in a well-stoppered bottle 10 drachms of chloroform with  $12\frac{1}{2}$  drachms of non-vulcanised caoutchouc in small pieces. The solution is easily effected, and, when finished, add  $2\frac{1}{2}$  drachms of mastich, and let the whole macerate from eight to ten days, shaking the mixture from time to time, but without heat. A perfectly white and very adhesive cement is thus produced. This compound is made on the same principle as the cement greatly in vogue amongst florists for making permanent bouquets.

\* \*

### THE LIMIT OF REGISTERING A COPYRIGHT.

A philosophical instrument ran a near chance of attaining literary distinction. In the Chancery Division of the High Court of Justice a plaintiff claimed to be the registered owner of a copyright in the dial of a barometer, and sought an injunction to restrain the defendant from infringing such copyright. Mr. Justice Chitty said that under the Act of 1842 no valid registration could exist. The letterpress on the dial had no use and conveyed no meaning except when read in connection with the dial-hands and the height of the mercury. If the plaintiff were right the barometer would be required to be sent as a book to the library of the British Museum. Case dismissed, as the application was absurd on the very face of it.

\* \*

### THE DETECTION OF ALOES.

Mr. R. A. Cripps and T. S. Dymond have proposed a new colour-test for the detection of aloes in pharmaceutical preparations. Hitherto the best method was that proposed by Bornträger, which consisted in extracting the substance with alcohol, filtering, shaking the filtrate with benzol, removing the benzol layer, and agitating it with ammonia. On standing, the aqueous liquid should assume a pink colour in presence of aloes. The coloration was tardy in production, and it has been shown by Lenz that any substance containing chrysophanic acid gives a similar result.

Klunge's test consisted in adding a drop of copper sulphate solution to a very dilute, almost colourless, solution of the suspected substance. An intense yellow, changed by warming with sodium chloride to a deep red or violet, indicated aloes. But all varieties of aloes do not give this deep red, nor is the distinctive yellow seen in solutions already containing yellow colouring matter, such as saffron. The authors have therefore devised a new test, intended to be applied directly to a solid substance:—Place 1 grain of the substance in a glass mortar standing on white paper; add 16 drops of strong sulphuric acid, and triturate till the whole is dissolved; add 4 drops of nitric acid, sp. gr. 1.42, and, lastly, 1 oz. of distilled water. If aloes be present a colour varying from deep orange to crimson will be produced, according to the kind of aloes employed. To confirm, add ammonia, when the colour is deepened, usually to a deep claret. By this means not only is aloes detected, but the kind of aloes is indicated—Barbados, true Socotrine, and Natal produce a crimson; while Hepatic and Cape gave only a deep orange-red coloration. For comparison,  $H_2SO_4$  and vapour of  $HNO_3$ ,

were also employed, which produce with certain aloes a play of colours passing through green, blue, and violet to crimson.

A large number of complex preparations were examined when it was seen that, though the presence of aloes never failed to make itself manifest, rhubarb and substances containing chrysophanic acid behaved in the same way. But using this test, a nearly colourless solution of aloes does not become pink on the addition of ammonia, as is the case with solutions of chrysophanic acid, and in this way aloes may be distinguished.

\* \*

### PROFESSOR REDWOOD ON PHARMACEUTICAL EDUCATION

Professor Redwood has paid a visit to the Midland Counties and delivered an address before the newly-formed classes in connection with the Midland Chemists' Association. His object was to explain and advocate the changes that have recently been proposed with regard to pharmaceutical education. It is now many years since the Professor was the first to teach pharmaceutical chemistry in a systematic manner, and it was singularly appropriate that he should have the task of inaugurating a school which has been the immediate outcome of an enlarged and comprehensive view of the altered conditions of affairs.

In the course of his remarks he drew a contrast between voluntary efforts and compulsory regulations, alluding more particularly to the little favour in which acquired knowledge on the student's part was once formerly regarded. Young men, on quitting the school with evidences of qualification for their intended vocation, were received with cold indifference by those from whom they sought employment. Great disappointment was the result; and the practical advantage to the mere assistant might frequently be rated at less than nothing. That hindrance has been removed, and we have instances, as conspicuous as they are numerous, that the contrary is the case. Young men are now selected for posts of honour and of emolument in our leading London and provincial establishments on account of distinction gained in their class studies; and no one can make a better financial investment than to display more than the average ability in the knowledge of his calling.

Masters, in our judgment, were by no means wholly to blame in a former want of appreciation. The educational scheme was a novelty, and an assistant presumed too much on what was only a fair commencement, which after year and experience would mature. He scarcely recognised that business tact and intelligence were quite as necessary as book-learning and laboratory experiments. So there was misunderstanding, hurtful to both sides, which time has happily removed. But we are forgetting Professor Redwood long may he enjoy the Indian summer on which he has entered! He would be an ingenious person who could discover a shade of decreasing power in his discourse to the men of Birmingham.

\* \*

Professor Redwood talked about the difficulties which beset the establishment of an association, how they have their fluctuations, their rise, and sometimes their fall. Once there was a great cry about the position of the assistant, his long hours, and the scanty provision for his improvement. Worse than all was that by his protracted occupations there was no chance for mental culture in the evening. An effort was necessary to be made at least to remove the charge of indifference on the part of the higher powers. Mr. Jacob Bell reflected on the matter, the result being that the library was to be opened when the shops were shut; the librarian became a sort of night-porter; the gas was lighted and a bright fire was kept burning: but no readers came, not even



the solitary one student who went to the pharmacy lecture at Newcastle-upon-Tyne. Which sad account you will find written in detail by the pharmacist whose marble bust now guards the hall in the Society's rooms.

Once there was another loud complaint, that a certain set, popularly called the "clique," monopolised the evening meetings. They read all the papers and made all the speeches, the chief offender being pointed out in the person of the professor who has just been on the Midland Circuit. So it was determined that on one occasion at least the members who had been so unjustly excluded from distinction should have the next monthly proceedings all their own way. It was so; but that way did not seem to lead to Bloomsbury Square, and not a solitary communication was forthcoming. We note another change, significant and undoubted. In days gone by the seniors talked while the young men listened; now the process is reversed, and our elders are having a good turn.

\* \*

## RHIGOLENE.

Rhigolene has again been commented on by Dr. Richardson. It is the crude or impure hydride of amyl, the lightest fluid of the petroleum series, vapour density 36;  $H = 1$ , with faint but pleasant odour and a slight taste, causing no irritation when inhaled. It mixes with anhydrous ether in all proportions. Rhigolene cannot be used as a local anæsthetic by absorption, but it is dispersed like ether in the form of spray; it thus produces extreme cold, and is applicable for superficial freezing, for which reason it became popular in dental practice.

The cold produced is so intense that in some instances the skin is rendered hard, white, and insensible in two seconds.

Its action is too rapid, the superficial substance being rendered a non-conductor, and deep insensibility is prevented.

In consequence of this drawback, Dr. Richardson constructed the "Compound Anæsthetic Ether" for local anæsthesia, consisting of equal parts of rhigolene and anhydrous ether.

Owing to its insolubility, rhigolene is not recommended for general anæsthesia. Various preparations have been devised; one is a saturated solution of spermaceti and camphor for external use.

Cetacei .. .. .	3j.
Pulv. camphore .. .. .	3j.
Rhigolene .. .. .	3ij.

Mix.

This is meant to be applied for burns; the rhigolene evaporating relieves the pain, while a protecting surface of camphor and spermaceti remains.

Finding that iodine was soluble in rhigolene, a solution was made to be applied to fetid wounds and affections of the throat.

Iodi .. .. .	gr. v.
Rhigolene .. .. .	3j.

Mix.

The same action takes place; the rhigolene evaporates and leaves iodine on the surface in a state of the finest subdivision. Sprayed into the throat, on one or two applications a portion of free iodine is left on the surface.

As an antiseptic, strong solution of ammonia is shaken up with rhigolene, and on decanting the aqueous portion an ammoniated solution is produced. This charged with camphor preserves natural history specimens. Dead objects are perfectly preserved by putting them for a short time into a bath of the solution, letting the fluid escape as vapour, and leaving the camphor in the tissues.

## WINE TESTS.

The Bulletin of the Society of Pharmacy of Bordeaux writes in favour of the wine merchants, and against public analysts, with regard to the alleged adulteration of wine. The assertion of the increased prevalence of fraud is said to be due to so-called experts whose reagents are considered infallible. With respect to the detection of plastering and colouring matters, merchants and consumers are warned against the exclusive use of barium chloride, which, according as the solution is thin, strongly acid, or neutral, gives with young wines contrary results not in accordance with facts, and produces the erroneous impression that the finest growths of the Gironde are plastered.

All pure wines contain sulphates, so that absence of precipitation would be proof of fraud.

The Society at Bordeaux recommends great caution in the use of reagents such as paper, wool, and alkalis for the detection of colouring-matter, as, owing to the changes wrought by new dyeing materials, the question can only be decided by the employment of a multitude of reagents applied by very skilful hands.

\* \*

## PHOSPHOROUS PILLS.

Mr. A. C. Abraham has read a practical paper on the "Medicinal Exhibition of Phosphorus in a Pillular Form," before the members of the Liverpool Chemists' Association. He has had over ten years to reflect upon his original proposal to dissolve phosphorus in washed tolu; or, if not to effect perfect solution, to reduce it to an extremely comminuted state fit for medical use. He points out that the balsam of tolu must be washed in order to free it from several bodies lighter than water, and to remove certain contaminations and impurities, in which may be included the cinnamic and (as some still maintain) the benzoic acid. Moreover, the resinous matter is thus saturated with as much water as it is capable of retaining. A pill made with 1 grain of phosphorated tolu, equal to  $\frac{1}{25}$  grain of phosphorus, when examined by the microscope is found to be composed of 10,000 particles. Mr. Abraham considers this a sufficiently fine state of division to justify us in regarding it as a satisfactory preparation, and one calculated to effect its object. Other pharmacists will share this opinion.

*Tolu Phosphoratum.*

						Grains
Washed balsam of tolu .. .. .	..	..	..	..	..	960
Phosphorus, pure .. .. .	..	..	..	..	..	4)

Place the tolu and phosphorus in a suitable enamelled iron basin, capable of holding about 40 oz. and containing about 20 oz of water. Heat the basin in a water-bath, and when the ingredients are thoroughly melted stir with a glass rod until particles of phosphorus can no longer be seen, taking care that the ingredients are not brought above the surface of the water. Continue the stirring constantly for fifteen minutes, remove the basin from the water-bath, place it under a tap, and pour over it cold water. When sufficiently cool, mix it further under the water with the hands for a short time, and finally place it under water in earthenware jars.

One grain contains  $\frac{1}{25}$  of a grain of phosphorus. A drop or two of some volatile liquid should be added immediately after crushing the tolu in the mortar, and before the addition of the excipient.

\* \*

## GODFREY'S FIRE-ANNIHILATOR.

Modern science is always on the alert to utilise known chemical facts and make them serviceable to the community and in this way distinctly science is the handmaid of trade



Our predecessors may be credited with equally good intentions, but with painfully less knowledge.

We have before us the original engraving representing the still more original idea of the last of the Godfrey's, when he constructed a fire-annihilator from which he expected great things. A house is in full blaze and a fireman is depicted, the functionary throwing in a wickered cask from which issues a copious stream of gas. Without the exercise of a strong imagination it does not seem probable that that fireman's efforts will meet with due reward. As a matter of fact the apparatus proved a complete failure in a financial point of view, and it did not increase the reputation of the inventor. The printed directions are conceived in a spirit of confidence which the event did not warrant:—"Direction for using the machine: Take off the tin cover, if you have time light the fuze, if not, throw the machine into the midst of the flames, and retire till the explosion is made, then enter and brush down any sparks that may remain." The motto chosen for the illustration is:

Sic Ignis, Igne.

## The Pharmaceutical Council.

AT the usual monthly meeting on February 4 all the members were present. Mr. Michael Carteighe, President, in the chair.

The President welcomed Mr. C. B. Allen, who took his seat in place of Mr. Andrews, resigned.

### RETIRING MEMBERS OF THE COUNCIL.

A lot having been taken to determine the seven members of the Council who should retire in May next, the following names were drawn:—

Atkins	Robbins	Williams
Borland	Savage	Woolley
Butt		

The following, who remained in by lot last year, now retire by rotation:—

Allen ( <i>vice</i> Andrews resigned)	Carteighe	Richardson
Bottle	Hampson	Symes
	Hills	

The following remain in office another year:—

Churchill	Radley	Squire
Gostling	Schacht	Young
Greenish		

### THE INTERNATIONAL PHARMACEUTICAL CONGRESS.

The PRESIDENT mentioned a letter which had been received from the Organising Committee of the Pharmaceutical Congress at Brussels, inviting the attendance of all members of the Society. The letter explained that it had been found impossible to fix the date of the Congress otherwise, and it was hoped that the British Pharmaceutical Conference could be postponed a few days, so as to enable more English pharmacists to visit Brussels. A postscript stated that it was hoped that a reduction of 50 per cent. on all railway fares would be allowed.

The PRESIDENT remarked that the date of the Congress would nearly coincide with the meetings of the German Apotheker Verein, as well as with those of the British Pharmaceutical Conference. He did not know whether it would be found possible to alter the dates of these meetings.

After the election of members, associates, &c.,

### THE REGISTRAR'S REPORT

was submitted. It showed that during the year life members had declined from 231 to 230, subscribing pharmaceutical chemist members from 1,632 to 1,617, and subscribing chemist and druggist members from 760 to 739. On the other hand, associates in business had increased from 1,178 to 1,234, associates not in business from 827 to 834, apprentices from 1,098 to 1,156.

The statistics of the examinations for 1884 were as follows:—

	No. of Candidates	Passed
Preliminary .. ..	1,266	612
Major (England and Wales) .. ..	79	41
" (Scotland) .. ..	2	0
Minor (England and Wales) .. ..	722	243
" (Scotland) .. ..	153	81
Modified (England and Wales) .. ..	1	1
" (Scotland) .. ..	1	1

The total number of names on the general register of pharmaceutical chemists and chemists and druggists on December 31, 1884, was 13,400, which was 265 fewer than in the previous year. It will be remembered that in the past year the Registrar's biennial purging of the register had taken place, resulting in the removal of 374 names. Beside these, 224 deaths had been noted, 16 names had been erased by request of registered persons themselves, and one by order of the Council. On the other hand, 328 names had been added after examination and 22 names had been restored to the register.

### THE PROPOSED NEW BY-LAWS.

The PRESIDENT moved, and the VICE-PRESIDENT seconded the second reading of the proposed new by-laws, which had been approved a first time last month.

Mr. GREENISH, who had been absent last month, expressed reasons for not agreeing with some portions of the new by-laws relating to examination. The original report of the Committee recommended the division of the Minor into two parts, but without stating what interval should elapse between them. It only stated that in the first part the practical portion should be done, and the scientific portion in the second part. This scheme of a written examination, to be taken at certain centres throughout the country, was sprung upon the Committee subsequently. He had protested against it then and ever since. When the Committee was re-appointed he was not nominated to serve upon it. If it were the case that he was intentionally omitted to silence a dissentient, he should consider the Committee a packed one. He maintained that this written examination in pharmaceutical general chemistry, and in the translation of prescription, being the first thing before an apprentice, his attention would be diverted from the technical subjects of the examination and his time would be occupied in reading theoretical books and the employer would have an excuse for paying no attention to his apprentice. A practical man who had passed an examination was more to be relied on than a theoretic man who had passed the highest examination of the Pharmaceutical Society. With regard to the legal aspect of the question, he asked how it was, if it were the case as had been stated that the solicitor had been in accord with the view that these recommendations could be passed, that his opinion had not been given? When he was on the Committee the solicitor said most distinctly that the arrangements with regard to the examinations could not be altered under the present Pharmacy Act. If this matter were pushed forward to the Privy Council, and its sanction were refused, he feared the progress of pharmacy law would be pushed back ten years.

Mr. SCHACHT was glad to know exactly what Mr. Greenish's views were. It seemed beyond question that in his opinion the safety of the public was best secured by pharmacists being ignorant of higher pharmacy, and of everything except the practical manipulations of the shop. If Mr. Greenish thought so let him do his best or his worst to prevent the passing of these by-laws.

Mr. HAMPSON said it was easy to misrepresent an opponent's views, and this Mr. Schacht had done. Mr. GREENISH also repeated some part of what he had said which would not bear the construction which had been put upon it.

Mr. SYMES thought it was unfortunate the discussion had been re-opened. He maintained that the proposed examination was most thoroughly practical. A youth who entered into pharmacy ought to have acquired some knowledge of elementary chemistry at school, or he had no business in pharmacy at all; and the other subjects were the translation of prescriptions and practical pharmacy. What could be more practical, and what could a youth do in a pharmacy until he could pass in these subjects? It was at first suggested that dispensing should be included, but it was



felt to be impossible to place a subject on which so severe an examination was necessary at so early a stage.

Mr. BORLAND wished to explain that though he had voted in the minority he was not opposed to a curriculum. His ground was that the Council were going beyond the power they possessed by the Act of Parliament.

Mr. WOOLLEY thought Mr. Schacht had not exaggerated Mr. Greenish's position. The statement of the latter lauding practice at the expense of theory was as unfortunate a one as could have fallen from a member of the Council. The division of the Minor into two parts would be accepted as a positive boon by the young men of the country.

Mr. RICHARDSON thought some of the speakers had been too hard on Mr. Greenish, who was one of the pioneers of pharmaceutical advancement. He regarded the passing of the Preliminary before entering upon chemistry as one of the most important features of the scheme.

The PRESIDENT said the details of these by-laws had been considered by ten or eleven gentlemen, who had recommended them unanimously. They thought it was desirable that when practical mechanical work was going on all day some theoretical knowledge should be acquired in the evenings, and they wanted to meet the complaint of apprentices, who asked what was the good of working in the first years of their time, as they could not go up till they were twenty-one. They wanted to prevent them from wasting their time in their apprenticeship and then coming up to London, thinking to acquire enough in six months to make them competent chemists and druggists. No dispenser of medicine or seller of poisons could be considered safe who had not some elementary knowledge of science. A man could not dispense properly without a knowledge of chemistry.

The VICE-PRESIDENT denied that Mr. Greenish had been purposely excluded from the Committee, and thought it would have been better if he had been on the Committee. He was, however, quite within his right in expressing his objections at this meeting. For himself, however, he was not at all with Mr. Greenish in his objections. He believed the plan proposed would be welcomed by young men, and would be essentially an anti-cramming proceeding. With regard to the legal question, he believed they had the judgment of the solicitor with them.

After a few more remarks the Council divided, when seventeen members voted for the second reading of the new by-laws, three (Messrs. Greenish, Hampson, and Williams) against it, and one (Mr. Borland) did not vote.

#### BENEVOLENT FUND.

One grant of 15*l.* and one of 5*l.* to widows of members, and one grant of 10*l.* and one of 5*l.* to widows of registered chemists and druggists, were recommended by the Committee. The death of an annuitant, Mrs. Sarah Wilson, elected in 1871, had been reported. The Committee had carefully considered Mr. Robbins' proposal, referred to them last month, but did not see their way to agree with it.

The recommendations were adopted.

#### LIBRARY AND MUSEUM.

Among the gifts to the library and museum were seven volumes, comprising catalogues of articles sold at Plough Court, inventories of drugs, &c., during nearly a century, from Thomas Hanbury, Esq.; a specimen of empyrenumatic oil of birch, from Mr. T. Greenish; twenty-seven specimens of drugs from Jamaica, from the Director of the Botanical Department, Jamaica; seeds of the plant yielding the Betheldorp aloes, from Messrs. B. G. Lennon & Co.; crystallised picrate of zinc, from Messrs. Wright, Layman & Umney; crystalline nitrate of lead, potassium ferrocyanide and ferricyanide, and calcium lactate, from Mr. E. Richardson Blundstone; two fine specimens of pip-menthol, from Mr. A. M. Todd, Michigan; specimens of spurious musk pods, from Messrs. A. S. Watson & Co., Hong-kong; specimen of Doundaki bark, from Messrs. T. Christy & Co.

#### THE PHARMACY ACT.

The solicitor's letter was included in the report of the General Purposes Committee, and stated that Albert Elliott & Co., West Bar, Sheffield, had paid 5*l.* 9*s.* penalty and costs into Court.

In one case of an infringement reported to the Committee proceedings were recommended to be instituted.

## Pharmaceutical Society of Ireland.

THE usual meeting of the Council was held on the 4th inst. Present, the president, J. E. Brunker, M.A., in the chair; Mr. Draper, vice-president; Dr. Collins, Professor Tichborne, Messrs. Wells, Minchin, Grindley, Hayes, and Hodgson.

After reading and discussing some correspondence of no general interest, the report of the Committee appointed to inquire into the proposal to establish a School of Pharmacy in connection with the Society was read, to the following effect:—

The Committee, having discussed the portion of Mr. McCormack's letter dealing with the formation of a school in connection with the Society, came to the following conclusion:—(1) That it is desirable that a School of Pharmacy and Chemistry should be instituted under the auspices of the Society; (2) that the funds of the Society are not available for the purpose; (3) that it appears that the only practical way of establishing such a school would be by forming a limited company. The Committee, therefore, recommended that a circular be issued to pharmaceutical chemists, apothecaries, and others likely to be interested, asking them what support they would give should such a company be started, and that information be sought as to what number of students would be likely to avail themselves of such a school.

The PRESIDENT said it was perfectly clear that the funds of the Society could not be made available for the establishment of a school, even though they had a reserve. The school at Bloomsbury Square was carried on in the premises of the English Society, but it was a private speculation, in no way under the control of the Council, and not deriving any funds from the Society. It remained to be seen whether sufficient support would be given to a limited company. If the proposed undertaking could be carried out in that way a great thing would be done, and the prestige of the Society would be raised very much.

Mr. HAYES: What about the suggestion of the Vice-President, that we should ask the Government for the use of the apparatus at the College of Science?

The PRESIDENT said that suggestion was discussed, but the opinion of the Committee was that it would be utterly impossible to approach the authorities of the College of Science as at present constituted with any prospect of success. The Professors there were paid for performing certain fixed duties, and the belief of the Committee was that they would not hand over their premises or apparatus to anyone else.

The VICE-PRESIDENT said the authorities of the College of Science did lend a room to a junior society in such a cheerful spirit as to encourage the hope that they might listen to another application of the kind. All that the Pharmaceutical Society would ask for would be the use of a room, benches, gas-fittings, &c. The apparatus of all kinds would be provided by the Society.

Professor TICHBORNE said the best course would be, in the first instance, to issue the circular, and ascertain to what extent the other plan would meet with support from the members of the Society. If it broke down they could try the alternative of applying to the College of Science; at the same time he was quite certain that they would only meet with refusal.

The VICE-PRESIDENT: I am not at all in favour of applying to the Government if we can help ourselves; but I should like to see night classes re-established in the College of Science; and if these could be used by the students of our Society so much the better. The institution on Stephen's Green should not be allowed to rust.

The PRESIDENT: It costs the country about 8,000*l.* a year, and is of little practical use to Ireland on its present footing.

Mr. HODGSON remarked that the night teaching formerly given in the College of Science had enabled several apprentices to become expert chemists. The best course for the Council to adopt now was to request the Committee to sit permanently, and also to send out the circulars suggesting the limited liability company.

The VICE-PRESIDENT said he thought a very moderate capital would suffice, perhaps about 1,000*l.*



Professor TICHBORNE remarked that he did not think the teaching of chemistry alone would support the school. They would also have to teach botany and materia medica.

Mr. HAYES moved and Mr. Minchin seconded a resolution—

That the report be adopted, and that the Committee be reappointed, and requested to carry out their suggestion.

Passed unanimously.

The report of the examiners in the Final examination lately held stated that seven candidates presented themselves, of whom the following five passed:—William H. Bowers, 34 Victoria Street, Dublin; Joseph Calvert, Ballynacrandle, Portadown; Thomas R. Connolly, 107 Upper George Street, Kingstown; Isaiah G. Gilmore, Lear House, Baillieborough, Cavan; and Samuel Wilson, Keady, County Armagh.

The PRESIDENT said that Dr. Duffey, one of the examiners, reported that there was lately an improvement in the answering of the candidates in botany, although it was still a weak point with them.

The report of the examiner in the Preliminary examination stated that twelve candidates passed and two were rejected.

On the motion of the PRESIDENT, seconded by Mr. HODGSON, Mr. Thomas Lemon, L.P.S.I., was elected a member of the Society.

The PRESIDENT stated that a further communication had been received from the President of the International Pharmaceutical Congress to be held at Brussels, giving a general invitation to all Irish pharmacists to attend the Congress. It was announced that during the meeting of the Congress the Belgian railway companies will give an abatement of 50 per cent. on their usual charges to all persons travelling on the lines who are members of the Congress. Those who intend to take part in the Congress should send in their names as adherents, when a special card will be sent them, entitling them to this and other privileges of the Congress.

## Metropolitan Reports.

**ENTERTAINMENT OF EMPLOYÉS.**—On the 2nd inst. Messrs. Lorimer & Co., of Hargrave Park Laboratory took the Holloway Hall to give an evening's entertainment to their employés. The company numbered about seventy, and as a large number of young women are employed in Messrs. Lorimer's works, the large room presented quite a gay appearance. Dancing formed the staple occupation of the evening, but vocal and instrumental music and various refreshments were discreetly interspersed. Mr. and Mrs. Lorimer sang "Huntingtower," and "Two Blind Beggars," a comic operetta, was well performed by two members of the establishment. The party broke up about 1 A.M.

**THE FIFTH ANNUAL DRAMATIC ENTERTAINMENT** by the Thalian Company in aid of the funds of the London Homœopathic Hospital and Medical School took place at St. George's Hall on January 15. Captain and Mrs. Conyers-D'Arcy, who direct the company, surpassed their previous efforts, excellent as they have always been, in providing a refined and entertaining performance. The acting of both Captain and Mrs. Conyers-D'Arcy was most admirable, and that of the other members of the company, in every way efficient. Various musical selections were effectively rendered by "The Euterpeans," a musical society, Colonel Douglas conducting. There was a large audience, and the proceeds amounted to 120l.

**S. MAW, SON & THOMPSON'S CRICKET CLUB.**—The annual dinner of this flourishing club took place on January 30 at the Holborn Restaurant. Mr. J. Banks occupied the chair, faced by Mr. J. Holdsworth. The usual loyal toasts having been duly honoured, the chairman gave the "Health of the Firm," to which Mr. C. T. Maw responded. The Chairman, in proposing "Success to the Club," dwelt on the efficient management thereof, and paid a high eulogium to the merits of Mr. R. Leng, the indefatigable secretary. Mr. R. Leng responded, and read the report for 1884, which showed that out of eleven matches five had been won, three lost, and three drawn (the latter rather in favour of the club). Numerous other toasts and

songs followed, and during the evening the following prize were awarded:—Club prize, to C. Jones, for highest average batting; batting prize, presented by Mr. Holdsworth, and won by Samuel Frampton; highest average bowling prize presented by Mr. J. Banks, won by F. Shaw; Mr. Carter attendance prize, won by F. Pearce. Messrs. R. Leng and F. Griffiths likewise received valuable testimonials in their capacities of secretary and umpire.

## Provincial Reports.

### BIRMINGHAM.

#### Notes written for THE CHEMIST AND DRUGGIST.

**TRADE** during the past month for shopkeepers and manufacturers is worse. Many works are still closed, yet our place of amusement are crowded. The annual chemists' ball passed off very successfully. The whole of the tickets, limited to 400, were sold some days previously, and were, in some cases sold again by early purchasers at a premium. The inaugural address, by Professor Redwood, on behalf of the classes recently started, was an honour to the town. He met with most enthusiastic reception. It is to be hoped that other professors will pay us a visit for our encouragement.

"Lewis" has purchased the premises adjoining his new buildings in Bull Street, recently occupied by Mr. J. Blackwell, pharmaceutical chemist. The Town Council have leased the site of the above premises to Mr. David Lewis at a rental of 200l. per annum. Mr. Blackwell has removed to 43 Bull Street (formerly Humphreys, chemist). This is the third shop Mr. Blackwell has occupied in Bull Street, in each case his predecessors being chemists.

In November I mentioned a well-known chemist being in litigation with the proprietors of a large co-operative store. I am glad to report that all has been amicably settled, and that a substantial solatium has been awarded to the chemist.

The commercial community were taken by surprise on January 13 by the announcement that Mr. G. Hull, druggist and drysalter, 77 Smallbrook Street, had petitioned the Court. He is the oldest drysalter in the town, having commenced business in 1843. Heavy domestic pecuniary losses are supposed to be the cause of his failure, and much sympathy is expressed for him.

After thirty-four years in business, Mr. C. Mantell, of Bristol Road, has retired in favour of his son.

Dr. A. Hill, the public analyst, has just issued his report for the quarter ending January 3, in which he states that 269 samples of food and drink were submitted to him for analysis. Amongst these were 34 samples of pepper, 24 of vinegar, 19 of mustard, 12 of ground ginger, 6 of arrowroot, 6 of milk of sulphur. Of the pepper 6 contained sandy matter, and 1 10 per cent. of wheat starch. In two of the mustard were found considerable quantities of turmeric and starch. Two of milk of sulphur contained upwards of 50 per cent. of sulphate of lime. All the other samples of those mentioned above were genuine, or nearly so.

Chemists' windows in this town present rather curious anomalies. In one we find the window half full of tins of insect powder, and the other half bottles of citrate of magnesia. Another, tins of jujubes, the contents of which have so combined together that it would be out of all reason to sell them as they are. Another (in one of the most fashionable thoroughfares) large slips pasted across the windows, "selling off"; and in the window of a firm of surgeon and chemist, in partnership, the following, written on a piece of card, with samples, is exhibited:—"Spring-flowering bulbs—Tulips, 3d. per dozen; gladiolus, 4d. per dozen; narcissus and pheasant's eyes, 1s. per dozen; hyacinths, 2d. each; lilies, 4d. each."

Mr. Proctor's cannibalistic theory progresses. We mentioned last month the annihilation of three chemists in close proximity. We now find but three chemists in Bull Street and Snow Hill, where formerly six existed, and in Broad Street four where seven existed.



The corner shops and premises, situate in Sherlock Street and Wrentham Street (with adjoining property), occupied by Mr. Walter Colley, chemist, at a rental of 70*l.* per annum, were sold on Thursday, January 29, by Messrs. J. & L. Lea, for 3,050*l.* The property was sold by order of the trustees of the late Thomas Slann, chemist and druggist.

It was a boast of the late "Tom Slann's" (as he was familiarly called) that many a morning before 9 A.M. he had taken more money than some chemists take in a week. He would open shop in the summer months at 6 A.M.

We have to record the unexpected death of Mr. Edward Press Turner, apothecary and surgeon, 15 Dale End, late of 37 Thomas Street, in his 82nd year, from bronchitis and failure of the heart's action. Amongst the poorer classes surrounding his shop he was deservedly respected. He commenced business here in 1843, and previously practised in Coventry.

Competition and opposition are the troubles of the day. The teachers of the classes recently started for pharmaceutical students must look to their laurels. Mr. Ernest Hyde, the well-known teacher of writing, has started similar classes, and it is rumoured that Mr. Woodward, of the Midland Institute, intends following his example.

In your Diary for 1882 you gave particulars of "Auxiliary Trades." With that issue a local chemist added an "auxiliary" in the way of tooth-extracting. As a proof of what small beginnings lead to, we may mention that last month he performed upwards of seventy extractions. All profit.

#### BRADFORD.

**DARING ROBBERY FROM A CHEMIST'S SHOP.**—An impudent robbery was committed on Monday evening from the shop of Messrs. F. M. Rimmington & Sons, 9 Bridge Street, Bradford. The senior partner, Mr. Rimmington, was on the point of closing the premises for the night when a man entered, and representing himself as an employé of Messrs. Harrison & Singleton, timber merchants, asked for 10 lbs. of linseed. Mr. Rimmington, whose assistants had all left, went into the cellar for the linseed, leaving the man alone in the shop. On returning he found the fellow had disappeared, and on examining the cash-drawers he discovered that a sum of about 140*l.* had been abstracted. The money was nearly all in cheques, and payment of these has been stopped.

#### CASTLE DONNINGTON.

**CATTLE-POISONING BY YEW.**—A strange occurrence took place at Donnington Park, the seat of Lord Donnington, this week. His lordship, like many other large landowners, is obliged to farm his own land, as no one else can be found to do it. About fifty beasts were turned into a large pasture sheltered north and east by woods, and were kept on hay and oilcake. On Sunday night, January 18, they broke into one of the woods, the undergrowth of which is principally yew. Of this they seem to have eaten freely. In the morning, when the stockman came, he found them lying about, many unable to move, and six dead. The remainder were conveyed home, and under the care of a neighbouring veterinary surgeon are recovering. The loss is a heavy one, as the dead beasts were worth 15*l.* each. The common idea is that it is only when withered that the yew is poisonous, and many horses will graze freely on the yew when growing, and are none the worse for it. In this case, however, all the yew was fresh and growing, and yet a speedy and deadly poison.

#### EDINBURGH.

MR. JAMES MARSHALL, retail manager to Messrs. J. F. MacFarlan & Co., 17 North Bridge, has acquired the business of Mr. James Leith, pharmaceutical chemist, Union Place.

MR. GEORGE TAYLOR is starting in business at Rosehall Terrace, Mayfield, and Mr. P. M. Hendry has acquired premises at Coltbridge for a similar purpose.

AT the next meeting of the Chemists' Assistants' and Apprentices' Association the members are to consider whether a universal price-list is desirable or not. Mr. J. R. Hill will lead off on the affirmative side and Mr. J. D. Robertson on the negative.

THE ANNUAL ENTERTAINMENT of the employés of Messrs. T. & H. Smith & Co. took place in St. Mary's Schoolroom on the evening of Friday, January 9. Mr. James Smiles occupied the chair, and expressed his pleasure at seeing so many old faces present, and, in the name of the firm, congratulated the company on this very gratifying evidence of mutual confidence and goodwill. Tea and fruit were served, and a concert of vocal and instrumental music was given.

#### HEREFORD.

AT the Hereford Winter Assizes, on January 25, Mary Whiting (on bail) was charged with unlawfully and feloniously causing to be taken by one Ellen Symonds, at Ross, 56 grains of a certain poison called perchloride of mercury, with intent to cause "miscarriage" of the said Ellen Symonds, on November 10, 1884. Mr. P. Baylis prosecuted, and prisoner was undefended. She pleaded "not guilty," but after a long hearing she was found "guilty" of the charge preferred against her. Sentence was deferred.

#### HAWICK.

##### PHARMACEUTICAL AND CHEMICAL ASSOCIATION.

THE January meeting of this Association was held on the evening of the 13th ult., when there was a fair attendance of members. After the minutes of the former meeting had been read and approved of, there was laid on the table a parcel of Rio ipcaeanha, presented by Messrs. Wright, Layman, & Umney, to whom a vote of thanks was unanimously passed for the gift. Thereafter the secretary (Mr. J. A. Hislop) read a paper on "Microphotography."

The February meeting was held on the evening of Tuesday the 10th inst. After the usual preliminaries the secretary laid on the table the "Year-Book of Pharmacy," for 1884, which had been received from the Committee of the Pharmaceutical Conference. The thanks of the meeting were voted for the Year-Book.

The secretary thereafter read a paper on "Menthol, and Menthol Cones," by Mr. G. C. Waldie, New York, which was illustrated by samples of menthol as imported and after purification, and by cones in various stages of manufacture. [This paper is printed on page 77.]

Mr. Maben, in moving a vote of thanks to Mr. Waldie for the very practical paper just read, and also for the samples which had accompanied it, said he had all the more pleasure in thanking Mr. Waldie from the fact that that gentleman was one of themselves. He was a native of the town, and served his apprenticeship there, and though he had gone to America before their Association had been founded, he was known to most of its members, and this paper showed that he had an interest in its prosperity. Mr. Waldie now occupied an important position in the firm of Dundas, Dick & Co., New York, and it had fallen to his lot to assist in the introduction of the menthol cones to the United States. He (Mr. Maben) had had some correspondence with him two years ago, when he was experimenting on the most suitable bases for cones, and the knowledge gained in these experiments had been embodied in the very practical paper read that night. From the results obtained by Mr. Waldie, it was evident that pure menthol was alone desirable for making cones, and the Government or the Inland Revenue Department were to be congratulated on having saved pharmacists in this country from making the mistake of selling mixed cones. Mr. Waldie's firm had been exceedingly successful in this department, so much so that, though the trade was barely a year old, cones were being turned out of their establishment at the rate of 100,000 per month. Mr. Waldie calculates that the total number of cones sold in 1884 would be about 4,000,000, which represents at retail figures a sum of \$1,000,000, or about 200,000*l.*

It had been Mr. Waldie's misfortune recently to lose an arm by a sad accident in the laboratory, but in spite of this he was working his way forward, and his friends in this country would be glad to know he had been so successful since he left its shores.

The vote of thanks was carried with acclamation, and the intimations for next meeting were then made.



## LEEDS.

**BAD SWEET SPIRIT OF NITRE.**—The *Leeds Express*, of February 10, gives the heading, "Bad Case of Adulteration at Horsforth," to a paragraph stating that James Thackeray, greengrocer, had been fined 5*l.* the previous day for the sale of 2 oz. of sweet nitre. Mr. A. H. Allen stated that it contained 27 per cent. of added water and a trace of nitrous ether.

## LIVERPOOL.

(SPECIAL CORRESPONDENCE.)

SOME time between the noon of Saturday, January 17, and the morning of Monday, January 19, a daring burglary was attempted on the premises of Messrs. Evans, Sons & Co., in Hanover Street. An entrance was effected from the roof by cutting through a skylight, and the thieves then worked their way down through the various departments until they reached the ground-floor; here they broke into the packing-room, and, by cutting a glass-panel from the door, got into the sample-room, but finding nothing in either place of special value to them, they next turned their attention to the offices, where they wrenched open some drawers, but here, again, they were disappointed, and ultimately retired, taking with them only a little petty cash, a few stamps, and other unimportant articles, the safes remaining intact. No clue to the perpetrators has been discovered, beyond the fact that they retired by way of the roof, walked along the roof of the adjoining premises, and then let themselves down by a rope into a wood yard.

A striking instance of the apathy of the "trade" in the district on the subject of education was afforded at the last meeting of the Liverpool Chemists' Association on January 29, when Dr. Symes was announced to read a paper on "The Proposed Amended By-laws of the Pharmaceutical Society as affecting Study and Examination." It might well be assumed that a subject of such vital interest to all connected with the trade, especially to the younger and unqualified members, would have brought together an unusually large number, especially as Dr. Symes, being a member of the Council, is so well qualified to speak upon the subject; but, at the time appointed for the reading of the paper, only about half-a-dozen people were present! It was felt by those present that it would be a pity for the paper to be read to so small an audience, and Dr. Symes consented to postpone it until the next meeting on February 12.

A novel idea in the way of advertising has just been introduced by a local firm of printers. It consists of a large counter-bill, which is divided into twelve parts, each part to contain an advertisement of a chemist in a different town, and so arranged that the specialties thus grouped shall not clash with each other. The firm then undertakes to bring about an exchange of articles advertised between the advertisers—so that each is not only pushing his own article, but has also got eleven other chemists helping him with the same, and he, of course, in return is helping to introduce theirs. Each issue of the bills is of 12,000, and the charge is a given sum for one or two twelfths of the page, and one or two thousand of the handbills.

A few businesses have exchanged hands during the month, amongst which may be noted that of Mr. Henderson, at Hoylake, which has been bought by Mr. Woodcock, of Birkenhead; and the old-established business of Mr. Smyth, in Islington Square, which has been purchased by Mr. V. Strawson, who already has a shop in Islington. But perhaps that which is of most interest to chemists of the neighbourhood generally is the stationery and printing concern carried on for so many years by Messrs. Fearnall, in Old Post Place, which has been taken over by Mr. G. Ellams, who for the last few years has practically had the management of it. Messrs. Fearnall had a large connection in the city, and have always done the printing for both the Liverpool Chemists' Association and the Registered Trade Association.

Amongst the plants in bloom at the Liverpool Botanic Gardens is *Dracæna Youngii*, a species of the *Dracæna*, or ancient dragon's-blood yielding plant, although it must be remembered that the dragon's blood of modern commerce is obtained chiefly from *Calamus draco*, nat. order *Palmeæ*. There is also to be seen a species of acacia, *A. suarcorensis*,

which is of special interest to the student of botany, as it affords a good instance of *Phyllodes*. The citron, *Citrus medica*, is in fruit; strange to say, it never yields but on fruit each season, and that usually a very fine one.

## NOTTINGHAM.

**THE CHEMISTS' ASSOCIATION ANNUAL SUPPER.**—On January 29 the annual supper of the Nottingham Chemists' Association was held at the George Hotel. The chair was occupied by Mr. Councillor Fitzhugh, J.P., President of the Society, and the vice-chair by Mr. M. H. Humphreys, Vice President. There was a large company present, including Mr. Councillor Baines, Professor Blake, Mr. Councillor Gibson, Mr. Roberts Jackson, Mr. J. H. Haywood, Mr. A. F. Pride, Mr. W. H. Parker, Mr. C. A. Bolton (honorary secretary), Mr. Beilby, Mr. Rogerson (Messrs. Hearon & Co.), Mr. Cobbe (Messrs. Burgoyne & Co.), Mr. Marriott, Mr. Vines, Mr. John Toplis, Mr. Thomas Roberts, Mr. Wariner, and Mr. Wilford. After the usual opening toasts Mr. Spencer proposed "Success to the Nottingham Chemists' Association," and associated the toast with the name of the chairman. The Chairman, in responding, dwelt upon the work of the Society in providing for the professional education of the boys who came into the profession. The success of the classes organised by the Association had been greater during the last three or four years, because of the advantages they received from the University College. He thought the College was of the greatest advantage to the town, for, as they had provided Board Schools for the working-classes, it was only right to do something on behalf of the middle classes. Mr. Roberts Jackson proposed "The University Professors," expressing himself, like the chairman, well pleased with the work of the University, and complimenting the professors thereof on their methods of instruction. He coupled the toast with the name of Professor Blake. This gentleman, in the course of his reply, remarked that of all the classes he had there was none which he met with greater pleasure than that of the Chemists' Association. The pupils were very attentive and very regular in their attendance, and there was reason to believe that they were making progress. He congratulated the Association on the energy displayed by their honorary secretary, Mr. Bolton, who kept the young men well to their work, and dwelt upon the fact that the association of the Society and the College was very satisfactory, more particularly as recently the authorities had ruled that the young men in the profession should attend some college or other for their instruction. Mr. Councillor Gibson proposed "Prosperity to the Town and Trade of Nottingham" in an interesting speech. He believed that, although the town was just now suffering some little depression, it would return to its old prosperity ere long. Mr. Councillor Baines acknowledged the toast. Mr. J. H. Haywood proposed "The Officers and Council of the Association," to which Mr. W. H. Parker (hon. treasurer) and Mr. C. A. Bolton (hon. secretary) responded, the remaining toast being "The Visitors," proposed by Mr. Beilby in a capital speech and answered by Messrs. Toplis and Marriott. During the evening some pleasing vocal selections were given by Mr. Rowe, Mr. Matthews, and Mr. Clegg, Mr. W. T. Cockrem presiding at the pianoforte.

## STOCKPORT.

**STOCKPORT SOCIETY OF NATURALISTS.**—On January 14 the annual meeting of this Society took place, when the President, Mr. Thomas Kay, of the well-known firm of Kay Brothers, delivered the opening address. The title was "Our Natural Scavengers," and the address dealt with organisms, from dogs to bacteria, which fed on carrion. A report was published in some of the local papers. Mr. F. Hudson, in moving a vote of thanks, said the lecture was the most learned he had ever listened to, and the reporters have not been able to destroy its interest.

## TUNSTALL.

**ADULTERATED PEPPER.**—On January 29 seven grocers were summoned at the Police Court for selling pepper adulterated with rice-meal, and each mulcted in fines and costs (costs in each case amounting to 18*s.*). All the



defendants pleaded they had bought it as genuine, and had sold it in the same condition as when received. The Stipendiary observed that in order to protect themselves they should either have obtained a written guarantee as to its purity or should explain to customers that they did not sell it as genuine.

#### WEST BROMWICH.

ON February 2 a child named John Cooper (aged 3 years), whose parents reside in South Street, was admitted into the District Hospital suffering from the effects of poison. It appears that the child went into a neighbour's house and drank a quantity of eye-lotion. On inquiry next day the child was progressing favourably, and was likely to recover.

#### WOLVERHAMPTON.

**SUPPOSED DEATH FROM SALIVATION.**—Mr. W. H. Phillips (Coroner) opened an inquest on January 15 touching the deaths of Eliza Jane Baxter (aged 25) and her infant male child. The deceased, who was wife of a cattle-drover, died on the 11th, and the child on the following day. Medical attendants had refused to give a certificate as to the cause of the woman's death. The evidence showed that about four months ago the woman, who suffered with pains in the face, procured some pills from Mr. Burnett, chemist, Horsley Fields, and that subsequently her gums became bad and her teeth loose. After her confinement, on December 8, she complained of pains in the region of the heart and under the shoulders. The child had been delicate from its birth. On December 29 she went to the hospital, and she told a witness that Dr. Fotherick had informed her that she was suffering from salivation. Mr. Burnett, chemist, who gave evidence, deposed that none of the pills he had sold the woman contained any mercurial preparation. The pills and boxes produced had not been obtained from his establishment. The inquiry was adjourned for a post-mortem examination to be made. The adjourned inquest was held on January 20. The medical evidence now showed that deceased had died from natural causes, and that some tic pills which she had taken had not done her any harm. A verdict to that effect was recorded, and the jury added that no blame was attached to Mr. Burnett, chemist, from whom the pills were purchased.

#### THE INTERNATIONAL PHARMACEUTICAL CONGRESS AT BRUSSELS.

**WE** have received for publication details of the sixth International Pharmaceutical Congress, to be held at Brussels from August 31 to September 6 of this year.

As already stated, the Congress is to be under the high protection of His Majesty the King of the Belgians; the honorary presidency of M. Thonissen, the Minister of the Interior and of Public Instruction; and the honorary vice-presidency of M. Buis, the Burgomaster of Brussels.

The purpose and scope of the Congress is described thus:—

To prosecute the work commenced in 1865 at Brunswick, continued in 1867 at Paris, in 1869 at Vienna, in 1874 at St. Petersburg, and in 1881 at London.

The Congress will have power to discuss all questions concerning the profession of a pharmacist, the progress of pharmaceutical sciences, and their application to hygiene. Everything foreign to these subjects will be excluded.

Governments, Academies, Universities, Schools of Pharmacy, Societies of Pharmacy, of Chemistry, of Hygiene, &c., are invited to assist and to be represented by delegates.

The Congress will group into four sections all questions which may be submitted to it by Societies of Pharmacy or members generally, as follows:—

(a) Professional; (b) theoretical or practical pharmacy; (c) chemistry in its relations with hygiene and public health; (d) chemistry, general or applied, biological or legal."

Four questions will be submitted for discussion in plenary sessions by the organising committee. These are:—

"1. Examination of the scheme of the International Pharmacopoeia sketched by the Commission appointed at the London Congress.

"2. Pharmaceutical teaching: what acquirements should precede pharmaceutical study; scientific pharmaceutical study; its professional applications.

"3. Falsifications of food (*denrées alimentaires*); legislation, administration, &c.

"4. Potable waters: what are their characters? in the present state of science what can be recommended as the best practical processes for ascertaining these characters?"

The Congress will prosecute its purpose by discussions; by the publication of its labours; by lectures or experimental demonstrations which may be organised during its continuance.

The Congress will occupy six days. There will be forenoon sessions for meetings of the sections, and afternoon sessions for general assemblies.

Besides the above, there will be two special assemblies, the first to open and the other to close the Congress. At the first the officers of the Congress and of the sections will be elected; at the second reports of the work accomplished will be submitted.

The sections will discuss the questions submitted to them by the organising committee. But, the day's programme being concluded, members may bring forward other questions with the consent of the officers.

At the general meeting discussions will be held on reports previously prepared; in the sections on communications presented by members.

These communications may expound facts or points of doctrine. The authors must accept all responsibility for them.

Unless by consent of the meeting the same speaker shall only speak twice on the same subject; and all speeches, lectures, &c., shall be limited to fifteen minutes. This regulation does not apply to the reporters.

No treatise previously published or communicated to a scientific society can be accepted.

The sessions shall be conducted in the French language; but speakers or authors may use any other language; but when any other language is used a translation in full or in abstract shall be supplied to the secretaries, and members present shall, if possible, give a summary translation to the meeting.

The organising committee shall publish a report of the work of the Congress, and shall decide respecting the complete or partial insertion or omission of communications.

The Congress shall consist of all persons, pharmacists and others, who shall have paid a fee of 10 francs, and shall have sent in their names.

All members have the right to take part in all the work and deliberations of the Congress, and shall receive its publications.

The organising committee shall name the officers of sections provisionally, but each section shall finally elect its own officers.

The Committee will receive gratefully all publications and communications submitted. These will be named in the report, and the committee may communicate them to the Congress.

Special regulations shall be drawn up subsequently to arrange other details. Programmes shall be published which shall indicate the orders of the day, and also, if desirable, particulars of excursions, fêtes, &c.

Signed for the Organising Committee, on December 20, 1884, by D. Van Bastelaer, President, and E. Van de Vyvere, Secretary.

**NOT A RELIABLE FIRM.**—A man brought home some rat-poison one evening. His mother-in-law mistook it for something else, and ate a quantity of it. They had a terrible time that night, but the old lady's life was saved.

"It was a close call," said the doctor the next morning; "she ate enough of it to kill a dozen persons, but fortunately the poison had been in stock a long time, and most of its strength had evaporated." Some months afterwards the son-in-law was asked if Messrs. Poulitice & Co. were reliable druggists to deal with.

"I wouldn't recommend them," he said. "They swindled me once on some rat-poison."—*New York Times*.



## THE DRUG-TRADE IN AUSTRALIA.

MR. F. S. GRIMWADE, of the firm of Felton, Grimwade & Co., Melbourne, is at present in England, and in the course of a conversation which took place in our office recently, some remarks of general interest were made, which he has allowed us to publish.

Mr. Grimwade has been in Australia twenty-two years. He went out in 1862 as manager for Youngman & Co., who started in business in Sydney as wholesale druggists in 1848, and subsequently established businesses in Victoria and New Zealand. The Melbourne firm was bought by Felton, Grimwade & Co. in 1867. The conversation ran as follows:

You have extended your business very considerably since you bought it?

Yes; and we have added glass-works, laboratory and drug-mills, and mineral-acid works.

## POSITION OF DRUGGISTS IN VICTORIA.

What is the position of retail druggists in Australia as compared with those in this country?

Better, generally, I should say. Of course, there is a good deal of competition in the retail trade, but not nearly so much as here. A retail druggist who knows his business well, and does it well, appears to stand a better chance in Victoria than in England. You find retired butchers, retired drapers, retired bakers in any large town in England, but you don't find retired chemists.

Do you find many in Australia?

Well, perhaps not at present; but there is not so much reason for complaint of illegitimate competition. Our Pharmacy Act is very stringent and is rigorously enforced. All druggists are coming to be men who have been apprenticed and thoroughly trained in their business.

Have you many really first-class businesses?

There are not more than five or six businesses in Melbourne that are of considerable value. In the suburbs and in country towns there are many good businesses, and generally there are very few doctors who dispense their own medicine. I don't think there are a dozen doctors in the whole of Victoria who do this. In every little country town in England you find the surgeon has a dispensary, but even in the far-away districts in Victoria, wherever there is population to support a doctor there is nearly always a chemist to dispense his medicines.

## PATENT MEDICINES.

Are patent medicines a considerable portion of the trade?

All the chemists sell patent medicines, and, altogether, they sell a great many. There is a very heavy import duty—nominally 25 per cent., but really 27½ per cent. on the wholesale value, amounting to, say, 2s. 4d. on a dozen of Holloway's or Coddle's pills. These are seldom sold for less than 1s. 6d. a box, but I don't think the price has much effect on the sales. If a man wants them he will have them, whether he pays 1s. or 1s. 6d.

Are patent medicines much esteemed in the colony?

They are useful, no doubt, but no more useful than the medicines the chemist can make himself. I often ask chemists why they should stand behind their counters and sell Coddle's pills at 1s. 6d., and get 6d. profit, when they could sell their own cathartic pills at 1s. and make 9d. profit if they would only talk a little to their customers.

Have not the stores reached Australia?

In Melbourne there are two "mutual" stores, and they and the grocers, and the country storekeepers (who sell everything) all deal in patent medicines, and do the principal trade. They cut the prices to some extent, but not so much, I think, as in England, as their expenses are heavier. There are no particular favourites among patent medicines. We don't sell so many as we used of the old-established English patents. They are being a little driven out by American specialties, which are advertised largely to the public, and, for the moment, are getting a large share of the favour of our limited community. Still, I don't think their large sales will be permanent.

## YOUNG MEN ARE WANTED.

What about the chances of an assistant who goes out to Australia, Mr. Grimwade?

Well, young men are wanted—that is, young men of the right sort. I have been in Victoria twenty-two years, and in that time hundreds of young men have come to me, and as a rule I have been able to find them good situations. I have never found any difficulty in placing good assistants. But it is of no use coming out without first passing the Pharmaceutical examinations; otherwise, they will have to be passed there which causes delay. Then, a young fellow should bring good testimonials, and as many letters of introduction as he can from personal acquaintances, to show that he is steady, and of really reliable character. I do not know any young man who has come out with these conditions who has failed to get on. If he is the kind of man who would get on at home he will have a better chance out there. Mr. Grimwade then referred to many chemists by name who had got from England during the past twenty or twenty-five years and who had become owners of businesses, and, in many cases, men of influence and means.

Referring to salaries paid, Mr. Grimwade said:—

A qualified assistant will get, in most cases, not less than 2l. a week in the house. A steady qualified man can pretty sure to get a situation at that rate as soon as he gets out. His hours would be much the same as here, but the climate makes his life more agreeable. As for his expense he would, perhaps, find clothing some 10 to 15 per cent. dearer, but other expenses would be much the same as here, except actual living, which is much cheaper in Melbourne, however, is fraught with temptation to spend money. All the restraining influences of parents, friends, and old associations are removed, and if a young man has any tendencies to unsteadiness, any lack of moral courage, it is as hard for him to keep straight as it is for an empty sack to stand upright.

## STARTING IN BUSINESS.

There is something in the air of our democratic country that makes men not contented to work as they do at home. Jack is as good as his master, and a little better, and an assistant who would be content to remain an assistant till thirty-four or thirty-five at home, out there will get engaged to be married at twenty-one, and then wants to start in business for himself. There are always facilities for starting, but I always recommend a young man to save something first. At 2l. a week he ought to be able to save 50l. a year. Let him go on like this for four or five years and get the interest, and then he can make a good start. The wholesale houses are generally ready to assist a man who has shown that he possesses self-restraint and other business qualities. One young man, I remember, remained assistant for six or seven years, and saved 400l. or 500l. He had been at Allen & Hanbury's, and it would have broken his heart to go into a paltry little business. He was assisted into a good one, and is now the head of a good firm. Many a young man makes a bad start, commences too soon, without even small capital, and comes to grief.

I would say again that it is no use any young man coming out unless he has passed his examinations, got good credentials and plenty of moral courage. If he has all these, and will work steadily and save a little money, he will find it easy to pass from a good situation to a business of his own, and he will reach a comfortable position in far less time in the colonies than in the old country.

## AMERICAN COMPETITION IS SERIOUS.

American manufacturers, we understand, are trying very hard to get hold of Australian trade; what do you think of their chances?

My experience of American firms is that they manufacture their goods with greater nicety, turn them out more reliably, pack them very much better, and in their general dealings with us in the colonies take more enlightened and broader views of business than do the older English houses. English people are not naturally prejudiced in favour of Americans. My sympathies are all with the English; I was born, brought up, and trained here. But I am bound to say that the English firms do not do their business so well, and are not



nearly so pleasant to deal with. Especially in the packing of patent medicines and glassware are Americans superior, and where there are mistakes in packing or breakages they are far more reasonable, and more ready to take you at your word and deal fairly with you.

Picking up a packet of a specialty in the office, Mr. Grimwade remarked that that was an example of the difference between English and American goods. This was loose and badly packed. If it had been American, machinery would have been employed, and a much more stylish packet, and one that would keep the contents better, would have been turned out.

#### INTRODUCTION OF NOVELTIES INTO AUSTRALIA.

Is there any particular class of goods wanted for the Australian market?

You may take it that at the present time Australia is so overdone with all kinds of specialties in the medical way (English, American, and German) that this is a very bad time to introduce novelties. You may also be sure that those enterprising men who wish to do this have not much sympathy from the wholesale houses. If a demand arises the articles have to be stocked, which increases the stocks of the wholesale druggists, who at the same time are introducing their own novelties.

#### FREE TRADE AND PROTECTION.

Is Victoria tending towards free trade, or not?

That question can hardly be answered definitely. I was on the Tariff Commission appointed in September, 1881, to inquire into the working of the tariff and the incidence of taxation. The Commission sat two years and examined some thousands of witnesses, costing the country from 15,000*l.* to 20,000*l.* The report presented last year contained recommendations favouring free trade in some respects and protection in others. It aimed to throw out from the tariff-list a number of articles not worth protecting. But the Government in power at the time the report was made was a coalition government, not strong enough to carry either a protectionist or a free-trade policy thoroughly. At present the question is in abeyance. But the reports of the inquiries of the Commission had a considerable educational effect. Each party heard the case of the other. I am a free trader myself, but the inquiry convinced me that protection did not do all the evil that is ascribed to it, and did secure important advantages, though the price paid for these may be too heavy. There is no doubt that Victoria, the only protectionist colony, has more manufactures than either of the other colonies, though they may have been bought dearly by the loss of other benefits.

#### THE WHOLESALE TRADE.

You are likely to be biassed a little, Mr. Grimwade, but as we hear sometimes reports of great things done by travellers for English houses in Australia, may we ask your opinion of such enterprise?

I would only say that there is very keen competition in the wholesale trade in all the capitals throughout Australia, and the retail chemists, in my opinion, are as well served by the established firms as their brethren in England. Very large stocks are held, and thus resident firms are, of course, able to give their customers considerable advantages. English firms establishing themselves out there have very uphill work.

As to the general prospects of English trade with Australia, it may be noted that whilst the population of the Australasian colonies is about three millions, the total import and export trade exceeds a hundred millions sterling per annum. More than half of this is with England. This is about double the whole trade of Canada.

#### PHARMACEUTICAL LEGISLATION IN QUEENSLAND.

FOR a third time a Bill to regulate the practice of pharmacy in Queensland has been brought before the two Houses of Legislature. We are indebted to Mr. Thomason, of Brisbane, for the official reports of the debates in the Upper House on the Bill sent up from below on Sept. 30, Nov. 13, and Dec. 5, and in the Lower House on the Bill as amended on Oct. 17. Hitherto the law affecting the practice of pharmacy in the colony was the Medical Act, 1857, which required all chemists and druggists to be registered and certificated by the Medical Board. The provision relating to the registration of chemists was as follows: "No chemist and druggist should obtain a certificate from the Medical Board of this colony, except upon the production of testimonials satisfactory to such board, and stating that he has been engaged for a period not less than three years in learning pharmacy and chemical affinities, and that he is qualified to compound and dispense medicines. Provided that this Act should not be construed so as to prevent any person from selling uncompounded drugs or patent medicines."

The Bill recently introduced for the third time is drawn on the lines of the Pharmacy Act of 1868. It constitutes a Board to consist of medical men and pharmacists, who are to appoint a board of Examiners and to make all regulations for the examination and registration of pharmaceutical chemists, and for the conduct of pharmacy, subject to no control except that their regulations must not oppose any of the laws at force in Queensland at the time, and that they must be published in the *Gazette*.

The Bill has been vehemently opposed in the past by the medical practitioners, on the ground that the pharmacists in the colony were too ignorant to undertake the functions of examination, though stray allusions in the course of the debate seem to point to trade jealousy.

The debate in the Upper House on the first occasion lasted till 10.15 p.m. The great subject of discussion was the constitution of the Pharmacy Board under clause 5. One party, led by the Postmaster-General, contended that no one should be admitted to the Board unless he held a certificate or diploma of competency as a pharmaceutical chemist, or a chemist and druggist from the Pharmaceutical Society of Great Britain, or any College or Board of Pharmacy recognised by the Board, or had passed examinations under the regulations, or was a legally qualified medical practitioner. To guard for all time against this great misfortune, registration conferring the title of Pharmaceutical Chemist was to be refused to all chemists and druggists who could not produce similar credentials. The other party, led by the Hon. A. J. Thynne, who had charge of the Bill, contended that this regulation would exclude from the Board, and from registration under the Act, nearly every chemist in the colonies, including all those who had been in practice there for many years past. The only persons qualified to form the Board would be the few young men who had recently come out from the mother country, without practical experience and with nothing but book learning to recommend them. The local chemists had themselves promoted this Bill to better secure the safety of the public. The medical men were themselves not a little responsible for the lax and dangerous system by which registration was granted to nearly every newcomer, and yet it was they who opposed the Bill most vehemently. There was a very long debate, revealing a plentiful lack of information, and very difficult to follow or gain a clear idea of. Apparently the Postmaster-General's view was carried by 7 to 4. When the Bill got to the Lower House the amendment was negative on the ground that, as there was no Board in existence, no College or Board of Pharmacy could be recognised by it; and the clause was amended so that any registered chemist and druggist could be appointed. Those calling themselves homœopathic chemists only are to be allowed to carry on business without interference. A clause had been put in as a sop to the medical men as follows: "A pharmaceutical chemist, who is not a legally qualified medical practitioner, shall not be entitled to charge or recover any remuneration for services rendered as a medical practitioner." The Lower House felt that, though this might be a good clause in itself, it had nothing to do with the Bill, and struck it out.

**VASELINE IN PASTRY.**—It was stated at a recent meeting of the Hygienic Council of the Department of the Seine at Paris, that it had been found that vaseline was being used in pastry in place of butter or fat. Pastry thus made will keep much longer than if butter be used, but vaseline has no nutritive properties, and its effect on the digestive apparatus has not been ascertained. The Council, therefore, advises that its use for pastry making shall not be permitted in France.



The amendment proposed by the Lower House in clause 5 was rejected, after another long discussion, by the Legislative Council, and the clause for the relief of homœopathic chemists was modified, so that none but those engaged in dispensing homœopathic medicines only at the time of the passing of the Act should be allowed to practise without passing the examination. The Lower House again discussed the matter, and returned the following message:—

The Legislative Assembly, having taken into consideration the Legislative Council's message, of date January 12, relative to the Pharmacy Bill, Insist upon the amendments in clause 5—

Because without them the Government would be limited in their choice of the members of the first Pharmacy Board to medical men, which would cause that Board only to be a repetition of the present Medical Board.

Because the members of the Pharmacy Board would not be of necessity examiners, but from their experience would be able to direct the lines on which examinations should be conducted, and to appoint examiners, whose specialties would be—Latin, botany, chemistry, &c.

Because the examination of candidates as to the knowledge of the qualities of drugs and their ability to detect adulterations can only be safely entrusted to men who have had great experience in the sale and purchase of drugs.

Because of the English Pharmacy Board very few of the members are themselves examiners.

Because it is not unusual in academical bodies that examinations for degrees or diplomas should be in part conducted by persons not themselves holding the degree or diploma.

Because the chemists of this colony are desirous of abolishing the present unsatisfactory system, and claim that they only wish to substitute a better one for their own credit and the safety of the public.

Because the object and intention of the Bill would be practically defeated without the amendments.

There was again a considerable discussion, but the Legislative Council agreed by a large majority not to insist on their disagreement to the amendment in clause 5. This fact was communicated to the Lower House, and the Bill has probably become law long before this appears. We congratulate the chemists of New South Wales, and, perhaps, we may specially indicate Mr. Yeo, the secretary to the Pharmaceutical Society, on the successful issue of a long and weary struggle, in which they have had to submit to an amount of opposition and even traduction from the practitioners of medicine. We have not the slightest doubt that their new powers will be used so wisely that their opponents, and the Postmaster-General in particular, will find they have been fighting a shadow, and that men who have never passed an examination themselves may have enlightened views on education and capacity to select the right person for duties they would not themselves undertake.

## PHARMACY IN AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

MELBOURNE, VICTORIA, December 20.

### THE EXAMINATIONS,

Held during the last quarter of the year, have just been completed, and, as usual with the last examinations of the year, were largely attended. In all 55 candidates presented themselves, 16 for the Preliminary, 22 for *Materia Medica* and Botany, and 17 for Elementary and Practical Chemistry. Of these 9 passed the Preliminary, 18 *Materia Medica* and Botany, and 15 Elementary and Practical Chemistry. The most successful student of the year was Mr. E. S. Church, who obtains both the gold medal of the Society and the prize given by the President of the Pharmaceutical Society. Messrs. Horace Watson and Thomas Obbinson were close up to Mr. Church. The students as a rule are reported as above the general average, and the percentage of those who passed is considered very good. The examinations lasted five days, and were held for the first time in the new premises.

### THE ANNUAL CONVERSAZIONE

Of the Pharmaceutical Society was held at the College on November 28. An excellent evening's entertainment and instruction was provided by the kindness of a number of gentlemen, who lectured, exhibited, or experimented.

The President, Mr. Thomas Hantsman, opened the proceedings with a short address, in which he said the meeting was held to commemorate the inauguration of the Pharmaceutical Society of Australasia, which had replaced the Pharmaceutical Society of Victoria. The new Society, like the old one, had but one aim, namely, that of keeping up the standard of pharmaceutical education to that obtaining in the old world. The President then alluded to the origin of the Society, and explained why the change in title had been made.

### THE PHARMACEUTICAL SOCIETIES OF VICTORIA AND NEW SOUTH WALES.

The recent conduct of the Pharmaceutical Society of New South Wales in passing a resolution declining to receive or recognise the Victorian certificate as a qualification for membership in New South Wales is much regretted, as it is thought not likely to add to the good feeling which should exist between the two societies.

### COURTESY FROM THE BRITISH PHARMACEUTICAL SOCIETY.

Advice has been received of the shipment of some specimens from the curator of the Museum of the Pharmaceutical Society of Great Britain. This is another instance of very kindly interest taken in Bloomsbury Square in the Australasian Society. Special thanks are due to Mr. Sidney Plowman and Dr. Redwood for their valuable assistance in London.

Mr. F. S. Grimwade, in a letter from London to the Hon. Secretary of the Pharmaceutical Society of Australasia, dated October 16, says:—"This morning I called upon the Pharmaceutical Society in Bloomsbury Square. The president, vice-president, Mr. Bremridge, and several of the professors and examiners to whom I had the pleasure of being introduced, received me with the greatest courtesy, and were most kind in their attentions, and I should like this mentioned at your next Council meeting, as showing the disposition of the parent Society towards anyone you may accredit to them."

### VICTORIA AT THE LONDON COLONIAL EXHIBITION, 1884.

The Government has decided on the appointment of Victorian Commissioner in connection with the Colonial Exhibition to be held at South Kensington in 1886. The Chief Secretary has been in communication with Mr. Bosvis who has expressed his willingness to accept the appointment of president.

### FROM NEW ZEALAND.

I hear that at the last examination of the Pharmacy Board, held in Auckland, the following candidates passed having obtained the percentage of marks opposite the names:—Joseph Leonard Edson, 83.6; Thomas Edmund Macdonald, 83.2; Philip John Le Quesne, 80.3. Five candidates attended the examination.

### FROM SYDNEY

I receive the following notes:—

The Chemists' Assistants' Association of New South Wales seems to be accomplishing a useful work among the class which it is designed to benefit. There are forty chemists' assistants enrolled as members and twenty honorary members.

At the recent examinations held by the Pharmacy Board William L. Gray obtained the highest number of marks, and William Bennett the second place. Both these gentlemen have been for some time students at the Technical College and it is a remarkable fact that all the Technical College students who presented themselves at this examination passed with credit.

Very little is heard regarding the doings of the Council of the Pharmaceutical Society, but a considerable amount of work is said to have been accomplished in the way of new rules, by-laws, and regulations for the conduct of examinations, &c. It is to be hoped that such rules will shortly be published for the information of persons interested in pharmaceutical education at home, as well as abroad.

There appears to be a feeling throughout the trade that some steps should be taken to organise periodic gatherings of the trade for the discussion of topics of interest. The annual meeting of the Society is the only gathering of this description.



tion, and this is by no means the best opportunity of dealing with many questions that arise, or for securing unanimity of action in cases where prompt steps are necessary. It has been suggested that our Society would gain in influence and importance if it established monthly meetings of its members and opened its library in the evenings for the benefit of apprentices and associates.

Dr. Roth has been appointed examiner in materia medica to the Technical College, and Dr. Rennie, who distinguished himself as being the first colonial who took the degree D.Sc. London, has resigned his position as instructor in the department of physics at the Technical College, to accept the position of Professor of Chemistry at the Adelaide University.

Under the present Poisons Act in New South Wales a man who does not possess any qualification as a druggist can dispense medicines and keep open shop, always provided that he does not sell poisons, although he may compound prescriptions containing poisons.

We hear nothing of the Conference, and the projected journal has not yet made its appearance. After the speeches made at the annual meeting it was thought that steps would have been taken ere now to have carried into effect the resolution then passed; but further consideration of these matters seems to have discouraged the promoters of these movements, and it seems to be thought that the advantage to be gained either by Conference or journal will not be in proportion to the labour or outlay necessary.

## PHARMACY IN CANADA.

(FROM OUR OWN CORRESPONDENT.)

MONTREAL, January 28.

THE failure of Messrs. J. C. Kemp & Co., patent-medicine dealers and manufacturers, 431 St. Paul Street, is announced. A meeting of creditors has been held, and a preliminary statement made by the remaining partner, which indicates a very bad state of affairs, and a very blue outlook for the creditors. Meantime, Kemp, who appears to be a minor, and therefore incapable legally to transact business on his own account, has absconded, and is now on the other side of line 45°, enjoying the hospitality of Uncle Sam. Such failures do not speak well for the business perspicuity of the creditors. Kemp started business in Montreal three years since, at the mature age of 17, with a capital of \$2,000, which he had borrowed from country farmers. Many of his debts are for advertising. He owes \$1,000 to an evening paper in the city.

Smith Brothers & Co., patent-medicine men, of 30 Hospital Street, whose failure I before mentioned, were sold out today by authority of justice. *Sic transit gloria mundi.*

Mr. Roch Dugal, a Montreal chemist, formerly doing business in Lower Town, Quebec, died suddenly last week, after about two hours' illness. Mr. Dugal filled the position of President of the Montreal College of Pharmacy at the time of his decease. He was universally respected.

A QUININE FACTORY has been established at Amsterdam by Herr van Dather, who has lately appealed by circular to the pharmacists and druggists of the Netherlands for their support of this home product. The *Pharm. Weekblad* has taken up the appeal as a matter of patriotism, and has published the names of seventy apothekers who pledge themselves to buy and sell no other quinine than that from the Amsterdam factory.

DRUGS FOR THE PARIS HOSPITALS.—The estimate of the quantity of medicines, &c., required for the use of the patients in the Paris hospitals for the present year is as follows:—24,000 kilogrammes of liquorice root, 15,000 of cinchona, 80,000 of linseed, 6,000 of mustard, 15,000 of cod-liver oil, 20,000 of glycerine, 3,000 of orange-flower water, 250 of opium, 2,000 of bromide of potassium, 50 of nitrate of silver, 500 of the subnitrate of bismuth, 60 of sulphate of quinine, 12,000 of carbolic acid, 10,000 of chloral. In addition to these drugs, the hospitals are annually supplied with 30,000 fresh lemons and 40,000 leeches. Fresh herbs are estimated to cost 1,946f.; dry herbs, 45,000f.

## MENTHOL AND MENTHOL CONES.

BY G. C. WALDIE, NEW YORK, U.S.A.

Read before the Hawick Pharmaceutical and Chemical Association, February 10, 1885.

MENTHOL has been known for a long period of time, but it is only during the last two years that it has become, owing to its great consumption in the manufacture of menthol cones or pencils, an article of commercial importance.

Menthol has been used by the Japanese for nearly 200 years, and is known by them as "Hakka-no-sei," or "Hakka-no-Hari." Previous to the late change in the social system of Japan, the native gentlemen there were accustomed to carry attached to their girdle a medicine-box, which contained, among other things, a compound called "Hotan," of which menthol was one of the principal ingredients.

As early as 1829 the composition of menthol had been investigated by the chemists Walter, Blanchett, Sell, and Dumas, by whom the substance was known as peppermint camphor or solidified oil of peppermint. Oppenheim mentions, in 1862, a Japanese oil of peppermint derived from *Mentha arvensis*, of which the melting-point was 36° C., the boiling-point 210° C., and the percentage composition—

C	..	..	..	..	..	..	..	..	76.93
H	..	..	..	..	..	..	..	..	13.40
O	..	..	..	..	..	..	..	..	9.67

In 1864 Mr. John Mackay, of Edinburgh, Scotland, notes the arrival in London of a quantity of Chinese oil of peppermint, some of the canisters of which had the peculiarity of becoming solid in cold weather. Mr. John Moss, in 1874, speaks of both the solid and liquid oils of peppermint as having arrived from Japan. The fusing-point of the solid oil he found to be 39° C., and the boiling-point 215° C. This same menthol was handed by Mr. Moss to Messrs. Beckett and Wright for examination, and after purification these chemists found its melting and boiling points to be 42.2° C. and 212° C. respectively, while by combustion they got 76.35 per cent. of carbon, and 12.91 per cent. of hydrogen. Menthol, which is a stearoptene of oil of peppermint, has also been investigated by Atkinson and Yoshida, and its formula is now generally recognised as being  $C_{10}H_{20}O$ .

Menthol is a proximate principle in oil of peppermint, but it appears to exist in larger proportion in the oil obtained from *Mentha arvensis*, var. *purpurascens*, than in any other oil. A variety of menthol is obtained in Michigan from the oil of *Mentha piperita*, which it has been proposed to call "pimenthol," in order to distinguish it from the Japanese article. Pimenthol has a distinct odour of oil of peppermint, whereas menthol has that odour but slightly.

*Mentha arvensis*, var. *purpurascens*, is a perennial herbaceous plant, with a creeping root, and quadrangular, purplish-coloured, and hairy stem. The leaves are opposite, serrate, smoother on the upper than on the lower surface, and of a dark greenish-purple colour, with a lighter shade of purple underneath. Clusters of small purplish-white flowers are produced on the axils of the leaves, and the plant grows to a height of from 1 to 3 feet.

There is apt to grow amongst this species of *mentha* a plant yielding inferior oil of peppermint, for which the name of *Mentha arvensis*, var. *vulgatissima*, has been proposed.

The plant grows both on wet and dry soils, but is best suited with one that is light and sandy. It is propagated by the root, pieces of which 6 inches long are thickly planted in the ground in November, and left until the spring. The ground is previously prepared by being well dug with spades, and divided into ridges, in which the roots are placed. In the spring the roots have grown about 3 inches above the



ground, and the roots are then transplanted to a previously-prepared site, and liberally supplied with good manure. The plant blossoms in June, the length of the herb being from 18 to 24 inches. It is then cut, a dry morning after rain being best suited for this operation. This gives the first crop, which is made up into bundles and dried in the shade. The ground is again manured, and a second crop is obtained in August.

The average yield of the dried herb is 5 tons per acre, but it varies greatly according to the weather, the nature of the soil, and the quantity of manure made use of. The plant grown in a dry season yields a much better oil, and this contains a larger percentage of menthol, though the yield per acre of the herb is less.

The cultivation of this plant rapidly exhausts the soil, and farmers are obliged to rotate their crops carefully.

The oil is extracted from the herb by the farmers by means of steam-distillation, the apparatus employed being of a somewhat primitive description. This operation gives crude oil of peppermint, and this is what the farmers sell to the agents who collect it from them.

Menthol is obtained in the laboratory by cooling the oil to 15° C., when the stearoptene readily crystallises in large trimetric crystals. These, when purified by repeated crystallisation, are in appearance not unlike magnesium sulphate. The crude oil contains from 50 to 60 per cent. of menthol, and in exceptionally dry seasons as much as 75 per cent. has been obtained. Commercial menthols melt at from 37.7° to 42.2° C., the melting-point depending on the freedom of the menthol from essential oil; a small percentage of essential oil lowers the melting-point considerably.

Menthol is very soluble in alcohol, ethers, chloroform, bisulphide of carbon, and most oils, but is more soluble in oil of peppermint than in any other. It has a specific gravity of 0.890, and small particles gyrate on the surface of water like camphor. Several compounds of menthol have been obtained, the acetate, which is got by heating menthol with glacial acetic acid, being a light oil-like body without colour. By substituting butyric for acetic acid butyrate of menthol is obtained. The compounds of the alkalies and menthol are very unstable, and need not be considered.

The following are regarded as reliable tests for the purity of menthol:—

1. It should be completely and readily soluble in twice its weight of chloroform. On the addition of a small quantity of iodine to this solution a rich indigo-blue colour (not dark green) ought to be imparted, and this colour should be completely discharged on shaking the mixture with solution of caustic potash or soda.

2. The melting-point ought to be 42.2° C. (108° F.), and the boiling-point not lower than 212° C. (413.6° F.), and there should be no residue on evaporation.

3. Menthol shaken with an oxidising mixture, such as sulphuric acid and bichromate of potash, ought to be entirely converted after prolonged heating into a dark green flocculous substance (menthene).

4. Strong sulphuric acid ought not in the cold to blacken menthol to any considerable extent.

5. When menthol is heated with a small quantity of anhydrous zinc chloride the mixture ought to give off the odour of menthene.

6. Strong caustic potash solution has no action on pure menthol.

It is only within the last three or four years that the value of menthol has been recognised by Western nations. The *Lancet* (London) drew attention to it in 1879, and since that period many medical men, both in Great Britain and America, have published their experiences of it as a remedy for diseases, such as headache, neuralgia, toothache, epidemic influenza, &c. So popular has this specific become that at the present day by far the largest proportion of the menthol produced is employed in the manufacture of menthol cones, which are made use of as a household remedy for nervous diseases such as those mentioned.

Menthol intended for the manufacture of cones must be without a trace of oil of peppermint, as the smallest per-

centage of the latter lowers the melting-point so much as render it quite unsuitable for this purpose. As yet there is a very few makes in the market suitable for cones, but it is highly probable that in the near future the contamination of menthol with oil will be entirely obviated in the process of production.

Menthol cones are made in the same way as suppositories, the menthol being first fused and then poured into metal moulds. The placing of the cones in the wooden cases is accomplished by simply heating the proper end of the cone in a small flame, as sealing-wax is heated, and quickly placing it in the recess. Wooden cases are preferable to those made of metal, the latter, owing to the property metal possesses of being a good conductor, being apt to get heated in warm climates. The result is that the menthol which touches the metal melts, and the cone becomes quite loose.

The different menthol cones in the market may be classed under five heads.

1. Cones prepared from pure menthol, that is, menthol having a melting-point of 42.2° C. The characteristics of these cones are that they are hard, and when scraped with the finger-nail feel gritty and stonelike. When rubbed on the skin they are susceptible of a high polish. The cone is completely soluble in alcohol, and a small piece heated in a test-tube melts very readily.

2. Cones that have been prepared with menthol that has not been completely freed from oil of peppermint. These are recognised by their comparatively strong odour of peppermint, and by their melting-point being under 42.2° C.

3. Cones made of wax, stearin, cetacem, or paraffin, with varying proportions of menthol. The menthol used in this class has not, as a rule, been completely freed from oil of peppermint.

These, when scraped with the finger-nail, have not the stone-like grit characteristic of the first class, but feel soft and yielding, and small pieces readily peel off. When a small portion is heated in a test-tube, a little is melted from the outside, and the remainder floats in the liquid thus formed at the same time slowly dissolving. A fragment placed in cold alcohol does not dissolve; if the cone has a larger percentage of menthol than wax, &c., the edge of the fragment becomes fringed, owing to the menthol dissolving out and leaving the wax which was disseminated throughout the cone as a framework; but if the wax be in excess the alcohol has no visible effect. If the alcohol be heated the fragments liquefy; the menthol dissolves in the alcohol, and the wax solidifies on cooling. The proportions of both may in this way be determined.

4. Cones consisting of menthol, with the addition of some powder as an adulterant.

These are recognised by simply rubbing them on the skin, when they impart a feeling as if the latter were being rubbed with pumice-stone soap. This is owing to the menthol dissolving out and leaving the grains of insoluble powder sticking on the cone like the pumice-stone in the soap.

5. Cones which may belong to any of the above classes, but which contain in addition a small percentage of eucalyptol, thymol, benzoic acid, or other irritant.

The distinguishing feature of this class is the intense prickling sensation experienced when the cone is applied to the skin, which presently assumes a bright scarlet appearance, the irritating effect produced by these substances being quite distinct from the cooling sensation imparted by menthol.

The action of menthol depends on its rapid and complete evaporation from the skin; but when a cone composed of greasy matter and menthol is used, the grease retards, if it does not actually prevent, this evaporation, and thus causes the menthol to act as an irritant. Pure menthol cones slowly evaporate on exposure to the air; in cones made partly of fatty matters this tendency is greatly checked. When any powder has been used to adulterate the menthol, it is seen as a coating on the outside of the cone after the latter has been exposed for a few days, the non-volatile powder having been left behind after the menthol had evaporated. It is clear, therefore, that only the purest menthol is suitable for the preparation of cones, and that no admixture of any kind ought to be employed in their manufacture.



## MIDLAND COUNTIES CHEMISTS' ASSOCIATION.

## DR. REDWOOD ON PHARMACEUTICAL EDUCATION.

ON January 28 Professor Redwood visited Birmingham to deliver an inaugural address to the students who had entered the pharmaceutical classes recently formed. The meeting was held at the Grand Hotel, and was presided over by Mr. Thomas Barclay. There was a large attendance, notwithstanding very bad weather. All the leading chemists in the town and district were present. The number of students now attending the classes is, we understand, 21.

Professor Redwood said he felt gratified at the compliment which had been paid him by being asked to take an active part in the opening proceedings, but still more gratified by the assurance which thus seemed to be conveyed that the new undertaking would be conducted on lines coinciding with those which had been recognised and adopted by the Society of which he was an officer. It would not be expected that he would wish to promote a system at variance with that in the establishment of which he had taken an active part 40 years ago, and with which he had been intimately associated ever since.

Dr. Redwood then proceeded to narrate the history of the establishment of the School of Pharmacy in Bloomsbury; and after tracing the discouragements which had been met with by those who endeavoured to provide high-class pharmaceutical education under a voluntary system, explained the circumstances which had led to the formation of a committee charged with a consideration of the relations to each other of pharmaceutical education and pharmaceutical examination.

In the following paragraphs Dr. Redwood gives a concise statement of the changes proposed:—

"There has been a general agreement of opinion in favour of requiring that the Preliminary examination should be passed before the commencement of the period of apprenticeship or pupilage, and that the latter should be completed before entering for the Minor examination. There has also been a general agreement of opinion in favour of imposing a curriculum of education. It is this and what has been termed the intermediate examination which most seriously affect the student.

"It is proposed that the Minor examination shall be divided in two parts, the first to be passed after completing the period of pupilage, and twelve months at least before entering for the second or final part of the Minor. The first part will therefore be intermediate between the Preliminary and the final part of the Minor. It will be a written examination on the subjects of general and pharmaceutical chemistry and the translation of prescriptions. The result will be registered, but no certificate given. There will be merely an intimation given as to whether it has been satisfactory or not. If the former, the candidate may then proceed to prepare for the final part of the Minor, otherwise he may try again until he succeeds. He will thus be introduced, as it were, to the examiners twelve months before he enters for the final part of his Minor examination. During that period he must enter to and diligently attend several courses of lectures on specified subjects, and a course of practical operations in chemistry. This will be the important part of the required curriculum. It will not be any lectures or any number of lectures that will suffice. It is not in the ordinary sense merely preparation for the examination that is wanted, nor is it instruction in the best mode of satisfying the examiners by set answers to what have been previously surreptitiously ascertained to be likely questions to be asked. What is wanted is the evidence of knowledge—a sound knowledge of the subjects specified, and this must be acquired by patient, persistent, systematic study of the subjects as legitimately taught in a manner approved by the Council of the Pharmaceutical Society.

"This arrangement will be beneficial in more ways than one. It will prove a stimulus to young men to enter upon and pursue the study of scientific subjects from the commencement of their pupilage. It will enable them to prove to the examiners from time to time what progress they are making in that direction, and it will enable the examiners to judge, much better than they otherwise could, how far the knowledge of which they obtain evidence at the examinations is an adequate part of a complete whole, that has been acquired and digested in such a way as to be a lasting possession.

"This is very much the mode of proceeding that has been adopted in the medical profession, and has there proved so beneficial."

As to the curriculum itself, Dr. Redwood refers for evidence of the intention of the Council to a syllabus proposed by the Committee and published in the *Pharmaceutical Journal*, April 15, 1882. According to the syllabus, the course on chemistry was to include 20 lectures on physics and 60 on chemistry, that on botany not less than 48 lectures, and that on materia medica not less than 40 lectures. Each course to extend over not less than five months. The course of practical chemistry to consist of three hours' daily work for five months, or five hours' daily work for three months.

"There is no reason to believe," Dr. Redwood continued, "that anything short of this will be accepted, and I am clearly of opinion that nothing short of this ought to be accepted. It might, it is true, be contended that a young man with the advantage of a good elementary education, and facilities afforded during his pupilage, if he have talent, industry, and power of application, might acquire the requisite knowledge by other means than those indicated—that is by private study, perhaps with the assistance of a tutor to guide him in the right course. We know that this is sometimes done, and well and thoroughly done, but we also know that by the average pharmaceutical student it cannot be done. It is often attempted with a result which is disastrous to a large proportion of our students, and not creditable to our profession, the arrangements for admission to which induce so many to waste their time and means in vain attempts to gain entrance without the requisite qualification, and, there is reason to believe, enable some to enter with very imperfect qualification.

"To students who are now pursuing or about to enter upon their studies the question what is the best course for them to adopt is a very important one. It is also important that those who undertake to provide means of instruction for such should adapt the means provided to what will most probably be the requirement of the law at no great distance of time hence.

"The answer to the students' question must necessarily be governed by a consideration of the means already existing or capable of being readily put into operation for aiding the acquirement of the several branches of knowledge specified. Unfortunately the provisions which have been made from time to time in our provincial towns have not been of a stable nature. A few occasional lectures or short courses on special subjects have been frequently undertaken and successfully carried out. All that can be done in that way, if it be legitimate teaching, cannot be otherwise than beneficial, especially in view of what is now in prospect, namely, the curriculum. Independently of that there might be danger of students relying too much upon incomplete instruction, and such as is more or less of a disconnected fragmentary nature. The evil commonly resulting from private study by referring to books and simple experiments is partly of that nature. It cannot be wholly relied upon by the average run of students, since too much of the matter passes through the sieve or never enters it. But independently of this, facts require as far as possible to be demonstrated, and the appeal must be made to all the senses. A chemist, who was also a great pharmacist, used to say that the very essence of a successful chemical lecture consisted in 'flash, bang, and stink.' So we may also say, What is botany or materia medica without reference to specimens, and the testing of these by the nose, the palate, and the eye, including, as a further aid, the microscope? Yet we cannot say, because books and simple experiments are not sufficient, that, therefore, they are not to be used. All available means may be used, provided they are of a nature calculated to supply facts to the mind and to impart sound knowledge, which, in relation to any special subject, to be fully efficient, ought to



include the means of linking the facts together, and presenting a connected whole.

"I have sometimes been almost afraid that the prospect of the curriculum might in one respect do mischief through the influence of its formidable character—that it might deter some from studying in a less formal manner, on the ground that such informal study will not be recognised at the final pass examination. There will, however, be an intermediate examination, and there is no curriculum for that. Obviously it is intended that students from the commencement of their apprenticeship should be studying and gathering knowledge the best way they can—simple and elementary knowledge first, as a stepping-stone or introduction to that which is to follow of a more complete and systematic character. There will be room enough for all the means of instruction at present existing in our provincial towns, and for much more. I should like to see classes established in every town where there are ten or a dozen druggists, and also associations of apprentices and assistants formed for mutual instruction in and beyond the subjects of the intermediate examination. There need be little or no expense incurred in carrying out such an object, if the use of a meeting-room could be obtained.

"But then there will be a final part of the Minor or a pass examination which must be at least twelve months after the intermediate, and in anticipation of this there must be a complete system of instruction obtained at a school, college, or institution, approved by the council. With reference to this part of the arrangement it is probable that advantage will be taken, wherever practicable, of the means afforded by existing public institutions. Local provincial associations are not likely to be able to provide and maintain the sort of institution contemplated, which in fact ought to be endowed, if for no other reason, at least for this, that its maintenance and regulations should not be dependent on the popularity with students of the mode of teaching adopted. In this respect public endowed institutions obviously occupy a better position than private schools. We have already one institution of the sort, namely, that at Manchester, where arrangements are made for receiving pharmaceutical students to six-months courses, and the instruction thus provided would appear to accord with what has been contemplated by the council of the Pharmaceutical Society. Other similar arrangements will no doubt be made elsewhere, and nowhere more properly than here in this great centre of the midland counties, where there exists an endowed college well suited for the purpose, with a distinguished professor of chemistry who was long associated with our school in Bloomsbury Square.

"The arrangements I am now referring to have reference to the contemplated future requirements of our students, for whom it may be hoped that several establishments will be provided or adjusted to meet what will by-and-by be demanded in the form of curriculum. Even the central school in Bloomsbury will require some fresh adjustment. When examinations became compulsory we were induced to shorten our courses of lectures to five months, as a temporary concession to the numerous class of students who were not prepared to incur the expense of long residence in London. That will no doubt have to be altered again, perhaps to six or eight months courses. But there will now have been ample notice given of what will be required, and no hardship on the score of surprise can be complained of in asking for evidence of efficient education from those who will present themselves for examination in 1889.

"There may, however, be some who will think that all this education is more than is necessary, and that the cost of acquiring it exceeds what the condition of pharmacy generally throughout the country will justify. This view of the subject certainly deserves attention, and has, in fact, received it. I am not prepared to contest the statements which have been made tending to show that the practice of pharmacy is in a somewhat depressed condition; but admitting this, and assuming that under the influence of the various circumstances which have tended to produce that result, there will be, or ought to be, a lessening of the number of those who will seek the certificate of qualification at a considerably increased cost, I do not see that on that account there is any sufficient ground for lowering the value of, or keeping at too low a value, the standard of qualification.

"If we compare the nature of the medical treatment of diseases now with what it was when the class of druggists

assumed the title of 'chemist and druggist,' and undertake the general duties of pharmacy in addition to those of mere dealers in drugs, it will be found that the sort of knowledge that sufficed then to enable the pharmacist to effect what the physician required, would be quite inadequate now. Look at the *materia medica* of a hundred years ago, and at the manner in which medicines were then and long afterwards administered. The drugs of those days were to a great extent such as had been dealt in by the grocers of a previous age, and the medicines prescribed by physicians at that time resembled those which have since been relegated to unorthodox domestic practice.

"We have now a class of medicines coming daily into use of a very potent, and many of them of a definite chemical nature, which are sometimes prescribed in a state of considerable concentration, and it is important that they should be precisely of the composition and strength intended. We reference also to medicines of a less definite nature, the object of improvements in the preparation of such has been to isolate the more active constituents as far as possible, and render them more active and certain in their effects. Much chemical and other scientific and technical knowledge is therefore required to enable those who deal in and dispense these various medicines to do so with safety to the public and advantage to the interests of medical science. The character, position, and influence of chemists and druggists as a body will depend not merely upon their having, as they long have had, distinguished individuals among them capable of occupying such a position, but upon the extent to which this applies to the body at large, and the attainment of such a position can be most efficiently promoted, and, as I believe, can only be ensured, by the adoption of regulations such as are now contemplated.

"And here I wish, in conclusion, to address myself to the students who are entering to these classes. I trust it will not be considered by any of you that, in advocating a more extended, systematic, and complete course of instruction than has hitherto been entered upon by the majority of those in your position, I am doing what is opposed to your interests; for although the proposition made may, to some, be slightly unpalatable, and its adoption perhaps inconvenient in pecuniary sense, I am satisfied that it would ultimately prove the best, if not the least costly, investment you could make. If you determine for a time to disregard the future examination, to set it aside altogether for the present, and study to acquire that which will most effectually tend to make you accomplished pharmacists and good chemists, devoting your whole energies to this object, your work will become lighter and your prospects brighter as you proceed. You will find that you are acquiring a sort of knowledge which, as it becomes more and more complete, will be a substantial and lasting possession, applicable to many pursuits, giving you especially the title of master in pharmacy, or, if that should fail, or other occupation be preferred, enabling you, as has enabled many students from our schools, to undertake other congenial—it may be, popularly, more important, and even more lucrative—occupation. And then again, if, as trust will be the case, you will most of you remain attached to the practice of pharmacy, but, as some have predicted there is destined to be a lessening of the number so attached, you may pin your faith to the established doctrine of 'the survival of the fittest.' Seek therefore to be of that number.

A vote of thanks to Professor Redwood was proposed by the chairman, seconded by Professor Tilden, and supported by brief speeches by Mr. Wright Wilson, Mr. C. J. Woodward and Professor Hillhouse, of Mason College.

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THE co-operative trade of the United Kingdom now amounts to 22,000,000*l.* sterling annually.—*Grocer.*

FROM Bridgetown, N.J., there is reported the case of a woman who works for a living, and eats nothing but min drops.

KEATING'S lozenges, we are told, are sold by all chemists in boxes. We do not know that there is any reason why chemists not in boxes should not sell them.

THE surplus on the Health Exhibition of 1884 amounts to 19,000*l.*, but the Council have decided not to distribute or dispose of this profit until the success of the International Exhibition shall have been assured.



## THE CHEMISTS' RETAIL.

A GERMAN book has been lying before us for some months bearing the title: "Unsere Handverkaufsartikel aus der Praxis für die Praxis," by M. Adolf Vomacka, editor of the *Pharm. Rundschau* of Leitmeritz, Bohemia. It is, as the title implies, a practical guide to the improvement of a chemist's retail business, and, recognising in it many useful hints, formulae, and advice which might be serviceable to English as well as to German readers, we have purchased from M. Vomacka the exclusive right of translating so much of his work as may seem suitable into English, during the year 1885, and propose to offer a series of articles in this and subsequent numbers of THE CHEMIST AND DRUGGIST, based on this translation.

It is to be understood that we do not print an exact translation; but any special comments of our own will be enclosed in brackets.

## INTRODUCTION.

[One of the prominent reasons for his work put forth by the author is the desirability of competing with the secret-medicine trade. We need not repeat the well-known arguments against this. But] in regard to such preparations, as well as in the case of perfumery and many other articles, it is very obvious that the sale depends, to a great extent, on the tasteful way in which the goods are put up, and also on the skill, perhaps in some instances on the boldness, of the literature of the labels. The pharmacist himself often takes such goods into stock because he does not expect to be able to put up the goods in such good style, and for this reason he sacrifices a good position and his profit, and risks some of his reputation, by selling the advertised goods.

In perfumery goods, pomades, cosmetics, tooth-powders, and such like, other traders are taking away a trade which was once recognised as belonging to the pharmacist.

In these, too, the pharmacist can supply the best of goods; but if he neglects the external appearance, the public, who can judge of that only, will be very likely to pass over his products.

Lastly, the importance of keeping ready put up a sufficient stock of household articles should be remembered. The customer, as a rule, believes more in an article which is packed than in one which has to be put up, not to speak of the convenience of having the goods at hand when asked for.

## ON BOTTLES, WRAPPERS, &amp;c.

Usefulness, as well as beauty of form, should be considered in choosing the necessary packages. Among vessels expressly adapted for their purposes may be mentioned the liqueur bottles to the neck of which a small drinking-glass is fitted, the wide-mouthed Carlsbad-salt bottles with hollow wooden tops, made to contain about 90 grains of the salt, the boxes or tins with perforated tops, made for sprinkling powders, and so on.

Expensive vessels are not suitable for articles of common use, but for articles of luxury and toilet preparations there is always a class of customers who will readily pay for some external elegance.

Stoppered bottles are preferable for the finest goods, and are necessary for caustic fluids. When corks are used, and numbers of bottles have to be corked at once, it is a good plan to first soak the corks in warm water. This makes them more elastic, fit better, and less liable to break, than if pressed dry. Generally, it is not desirable to force the cork down flush with the bottle.

## CAPPING.

When it is desired to cap bottles with coloured glazed paper, take a piece of suitable size, round or square, and lay inside it a piece of silk paper of the same size; lay this double sheet on the cork, hold it firmly with the thumb of the left hand, while with the thumb and forefinger of the right hand it is fitted to the neck of the bottle. Tie it with correspondingly-coloured twine, and either make a bow with the ends of the twine or bring these to the top or in front of the cork, where they can be fixed either with a wafer with the firm's title, or with a seal. Tinfoil or parchment paper is similarly used, but the latter must be damped before using. This is especially suitable for bottles containing volatile substances. Lamb's leather is used either dry or, more easily, after soaking in warm water and drying between linen. By damping the leather loses somewhat of its whiteness. Narrow silk bands can be fixed round leather caps. Fish-skin or gut-skin caps are only suitable for smooth glass stoppers. Being transparent, they do not look well over corks.

These fish-skin caps can be made very showy by varnishing them. In ordinary copal varnish some aniline dye is dissolved, and the cap is painted with the tinted varnish—or the uncoloured varnish is painted on the cap, and before it is quite dry some bronze-powder (either gold, silver, or some other kind) is sprinkled over it.

Corked bottles may be sealed with wax, but a cheaper and generally preferable plan is to cover them with one of the varnishes named below:—

1. Soak 10 parts of finely-cut gelatine or fine glue over night in 50 parts of water; add 50 parts of glycerine, and dissolve by aid of a water-bath with occasional stirring.

2. Soak 10 parts of gelatine in water over night, in the morning pour off the water, add 60 parts of glycerine, and dissolve in a water-bath. Add with careful stirring (so as not to occasion air-bubbles) 5 parts of tannin dissolved in 10 parts of spirit. This will tend to give a flaky appearance, but by careful stirring a slightly opalescent solution can be obtained.

3. Dissolve 7 parts of yellow resin in 10 parts of ether, and add 15 parts of collodion.

4. Dissolve 4 parts of collodion wool in 56 parts of wood spirit, and add 1 part of castor oil.

5. A solution of 2 parts of dammar resin in 1 part of ether. In any of the above cases the varnishes are coloured to fancy with an aniline or mineral colour. The former is preferable both because it is cheaper and also because mineral colours have a tendency to harden very quickly with glue.

To apply these varnishes, a little piece of tinfoil should first be fastened on the cork to prevent the absorption of the varnish. The varnish should be freed from air-bubbles by stirring with a stiff card; it should be only moderately warm. The head of the bottle must be dipped in the solution perpendicularly, and turned round a few times in the air to get an even layer of varnish. Those numbered 4 and 5 can be bronzed.

## WRAPPING.

[Mr. Vomacka discusses at considerable length, and with, quite unnecessary detail, the processes of wrapping bottles, packing powders, and so forth. This need not be reproduced here. We may add that unless the chemist has some natural tastefulness and neatness, and will go to the expense of obtaining the proper vessels and packing materials, he had much better buy his stock ready put up. It is, after all, only a question of which will pay best, for, as a matter of fact, the quality of the put-up goods is generally quite satisfactory. Putting up goods is only profitable if time which would otherwise be wasted is utilised in the occupation.]

## FORMULÆ.

[The peculiarity of the collection of formulas which follows consists in the very detailed instructions given respecting the style of get-up, labelling, &c. We shall give generally Mr. Vomacka's suggestions in full; and they can hardly fail to give some ideas, though in many cases these can, no doubt, be improved upon, and will often require modification for English customers. When no weights are named parts are understood, and all parts are to be taken by weight.]



## TINCTURE OF ARNICA.

Arnica flowers .. .. .	10
Arnica leaves .. .. .	30
Arnica root .. .. .	60
S.V.R., dilute, 70 per cent. .. .. .	500

Cut up and crush the dry ingredients, macerate for several days, press and filter.

To obtain the beautiful green colour which seems to be generally expected in this tincture, it is sometimes coloured with chlorophyll green. This can be obtained as follows:—Digest leaves of grass, nettles, spinach, or other green herb in

water, pour off the water, and crush the herb to a pulp. Boil this for a little while with an equal weight of a half-per-cent. soda lye, and afterwards precipitate the chlorophyll by means of diluted hydrochloric acid, wash the chlorophyll well with water, press and dry it. Use as much for the tincture as may be found necessary, or a few fresh green leaves (say 20 parts) may be added to the formula above, to-

gether with a few crystals of carbonate of soda, then press and filter.

Very careful filtration is important in the case of arnica tincture, because the fine hairy pappus of the flowers is very irritating to wounds.

The above label is recommended.

## DR. ROMERSHAUSEN'S EYE ESSENCE.

Herbe plantaginis majoris recentis .. .. .	50
Seminum fœniculi .. .. .	150
S.V.R., dil., 65 per cent. .. .. .	1,300
Ol. fœniculi .. .. .	4
Ol. rosmarini .. .. .	5

Spinach or other green leaves may be substituted for the plantain. It must be crushed in a glass or porcelain mortar,

Since 1842 this application has been proved thousands of times to possess gradual but certain power in the restoration, strengthening, and preservation of the sight of eyes which still retain their normal faculties. It is very valuable when the sight has been affected by reading or study, too much smoking, the use of unsuitable glasses, or other causes.

**Dr. Romershausen's Eye Essence.**

Directions  
for use—Dilute

this essence with  
distilled water in the

proportion of 1 to 5. Damp a  
soft linen rag with this mixture,

close the eyes and the eyelids, and bathe

all round the eyes with the solution.

After use the eyes should not be strained nor  
dazzled with strong light.

and the spirit poured over it. The fennel-seeds, crushed, freed from dust, and washed with water in a fine sieve, are added, and all macerated for a long time in a dark warm place. Add the essences. Press and filter. The fennel and the oils should be carefully chosen. Label as above.

## HUNGARIAN BEARD-WAX.

Spermaceti .. .. .	2
White or yellow wax .. .. .	20
Distilled water .. .. .	50
Gum arabic .. .. .	15
Powdered soap .. .. .	10
Glycerine .. .. .	2
Bergamot and geranium oils (of each) .. .. .	1

Rub the soap and the gum with 20 parts of the water to a smooth fluid. Melt the wax and the spermaceti with the rest of the water in a water-bath, and mix with it the fluid compound (warmed) gradually, with vigorous stirring, keeping the wax mixture still over the heat. Remove all from the fire, add the glycerine drop by drop, and set aside.

## Hungarian Beard Wax.

An elegant Preparation which  
will retain the Beard in any  
desired form or direction.

cool. When cool, perfume as directed or otherwise. In well-stoppered vessels this will keep for a considerable time. For black or brown beards a little amber or sienna may be rubbed smooth with the glycerine. For white beards, white wax only must be used. The above label will show the purpose of this beard-wax.

## HEMOSTATIC (OR STYPTIC) COTTON WOOL

S.V.R. .. .. .	30
Liq. ferri sesquichlor. .. .. .	5
Cotton-wool .. .. .	50

Free the cotton-wool from grease, soak it in the mixture of liquids, dry it in a dark place where there is a good current

## Hemostatic Cotton Wool

A small layer of this Cotton Wool applied to a cut or wound will at once check the bleeding.

## On the Treatment of Wounds.

The wound should first be washed with pure spring water, or preferably with a 2 per cent. solution of carbolic acid, and then a piece of this Cotton Wool should be laid on it and bandaged. When the bleeding has entirely ceased the Cotton Wool may be removed very gently with the aid of a little lukewarm water, and the wound should then be covered with plaster. A wound so treated heals very quickly, and almost without leaving a scar.

of air. Pack in parchment-paper or in well-closed vessels. The wool is very hygroscopic. The parchment-paper packet should again be wrapped in tinfoil and labelled.



## PERFUMED BENZINE.

Use a highly-rectified and odourless petroleum-ether, and perfume with 1 per cent. of oil of lavender. Petroleum-ether may be rectified and rendered odourless by mixing 570 parts of it with a cooled solution of 62 parts of bichromate of potash in 372 of water and 93 of sulphuric acid, letting the whole stand for a long time, frequently shaking. Ultimately the benzine can be drawn off from the acid solution. Two labels are recommended for these bottles.

## Perfumed Benzine.

For Cleansing all kinds of materials, such as Silk, Cloth, Woollen and Cotton Goods, Furniture, Tulle, Lace, Gloves, &c.

Unlike many other cleansing solutions, this cannot possibly cause any injury to even the most delicate fabrics.

## Directions for the Use of the Perfumed Benzine.

**N.B.—IN MAKING USE OF BENZINE NEVER LET IT COME NEAR AN OPEN FLAME.**

The material to be cleaned should be laid on several folds of clean blotting-paper or linen, the stain should be covered with a few drops of the Benzine, and when the stained portion of the fabric is perfectly soaked with it some dry powder, such as China clay or magnesia, is sprinkled over it and pressed firmly. After three minutes shake off the powder and wipe the spot either with a linen rag or with some crumb of bread, and lastly with a brush. If the stain be not entirely removed by this treatment the operation must be repeated.

**Tulle or lace** may be dipped in the Benzine twice, and dried by spreading on a clean napkin on a table.

**Coats, jackets, &c.,** may be cleaned by wiping them a few times with a sponge wetted with the Benzine.

**Silks and wools** may be treated as first directed.

**Gloves** may be drawn on the hand, buttoned, and the stains rubbed with a sponge wetted with the Benzine. The gloves are then taken off and dipped once or twice in a basin filled with the Benzine, and dried with a clean napkin. Lastly, wipe them with a flannel rag and hang them by a thread through the buttonholes to dry in the air.

## BITTER WATER.

Magnes. sulph.	..	..	..	..	..	55
Sodæ sulph...	..	..	..	..	..	55
Sodæ bicarb.	..	..	..	..	..	1½
Sodii chlorid.	..	..	..	..	..	2
Aq. destill.	..	..	..	..	..	1,000

Or—

Magnes. sulph.	..	..	..	..	..	50
Sodæ sulph...	..	..	..	..	..	50
Sodæ bicarb.	..	..	..	..	..	1
Sodii chlorid.	..	..	..	..	..	2
Potass. sulph.	..	..	..	..	..	1
Potassii chlorid.	..	..	..	..	..	1
Aq. destill.	..	..	..	..	..	1,000

Dissolve and filter. Fill in stone seltzer-bottles, cork well, and cover the cork with a metallic capsule; label as under. Charge a moderate price, and allow for returned bottles, and this water will generally be preferred to the natural, especially as its composition can always be depended upon. [It might be advisable to inform local medical men of its formula.]

## BITTER WINE.

Herbæ cardui benedicti (blessed thistle)	..	200
Herbæ centaurii (true centaury)	..	20
Herbæ trifolii fibrini (blackbean)	..	20
Baccarum juniperi	..	12
Rhizomatis galangæ	..	10
Caryophyllorum	..	10
Corticis limonis recentis	..	10
Corticis aurantiorum recentis	..	10
Spiritus vini	..	500
Aque destillatæ	..	5,000
Vini albi	..	4,500

Cut the solid ingredients small, macerate them in the mixed liquids for eight days, press and filter. The addition of the spirit is necessary to make the wine keep. Put up in small wine-bottles, and capsule the corks. [This preparation could only be sold in this country by licensed wine or spirit dealers, unless it bore the patent-medicine stamp, and with that the subjoined label might be used.]

[This Label should be printed much larger.]

## BITTER WATER

(Contains in 100 parts 11 parts of solid constituents).

This contains all the active ingredients of the natural bitter purgative waters in exact proportions.

**Properties.**—Gently laxative and painless action.\*

The ordinary dose for an adult is a wineglassful every morning. In cases of illness, the dose should be regulated by the physician.

For the empty bottle will be allowed.

\* Out of respect to the Board of Inland Revenue, this line had better be omitted from English labels.]

## BITTER WINE

Is compounded with some of the most valuable Tonic Herbs, and is especially recommended in many stomach disorders, such as loss of appetite, cramps, flatulence, and weak digestion.

A wineglassful taken morning and evening greatly assists the digestive processes and strengthens the stomach.



## BLOOD-PURIFYING PILLS.

## I.

Ferri sulphatis .. .. .	10 grammes
Aloe socotrinae .. .. .	10 "
S.V.R. .. .. .	q.s.

Divide in 200 pills.

## II.

Ferri sulph. .. .. .	5 grammes
Ex. colocynth. .. .. .	40 "
Ol. menth. pip. .. .. .	1 "
Glycerin. solid (glyc. 4, gelatin. 1) .. .. .	q.s.

Ut fiat massam e qua formentur pilulae 1,000.

In making pills from the first formula use sufficient spirit to make a very soft mass, let it dry, and then make up to a workable mass with a little more spirit. This is the formula of the German Pharmacopoeia. These pills are said to have an exceptionally certain and painless action, the iron apparently modifying and improving the action of the aloes. But in view of the objections to the continued use of aloes, and its disposition to occasion piles, Mr. Vomacka recommends the second formula as in all respects equal in action, and free from the objection referred to. The very small size of the pills is also appreciated by the public.

To get a beautiful surface on these pills, they may be either gelatine-coated (see THE CHEMISTS' AND DRUGGISTS' DIARY, 1885), or more simply treated in one of the two following ways:—Melt some cocoa-butter in a shallow plate, with as little heat as possible; roll the pills in it and turn them out on a tray containing powdered starch, and roll till they are evenly covered; or (2), instead of cocoa-butter, use tincture of benzoin, and, instead of starch, use finely-powdered chocolate.

The labels for these pills depend upon the boxes in which they are sold. As a slight variation from the ordinary pill-box label, the following is suggested:—



With this a strip label should be fixed round the box, or should accompany it, with some wording as under:—

*Directions for taking the Blood-purifying Pills.*—The best time for taking these pills is at bed-time. The ordinary dose for an adult is two or three pills; but this dose may be increased or diminished, according to age and temperament. During treatment for any complaint

they should not be taken without the approval of the medical attendant.

Such labels would not render the pills liable to stamps, but, if they are recommended by handbill or otherwise, they must be stamped, and may then be described as possessing tonic, gently purgative, and blood-purifying properties.

As a variation, they might be put up in flat, square boxes.

**INOCULATION IN YELLOW FEVER.**—Dr. Domingo Freire, of Rio de Janeiro, whose claim to have discovered a microbe in yellow fever has been previously mentioned by us, has developed his experiments so as to form a vaccine matter. The success was so marked in the case of those who allowed themselves to be experimented upon that he afterwards vaccinated workmen in the harbour, and more than 500 persons in the capital itself. None of them were attacked by the disease, except a few who had it in the most modified and mildest form.

**THE CULTIVATION OF THE NETTLE.**—A considerable impetus has been given in Germany to the artificial growth of the nettle (*Urtica dioica*) by a German lady living at Langenschwalbach, who has been studying and systematically experimenting upon it, for the sake of the fibre, which ranks high for tenacity. Not content with cultivating it in the ordinary forest or waste land, she has persuaded several landowners to plant an acre of first-class wheat land with nettles, in order to see how far the qualities of the fibre would be improved.

## FORMULE FOR PERFUMES.

THE Chicago *Druggist* publishes the following series of formulae for perfumes, contained in a paper read before the Michigan Pharmaceutical Association, at Detroit, by Dr. Jacob Jesson, of Muskegon. The writer asserts that the manufacture of perfumes properly belongs to the pharmacist; that with ordinary intelligence he should be able to supply goods equal to those of home or foreign specialists. The formulae, he adds, have been in use seven years, and may be regarded as reliable. The author divides his subject into three parts. (1) A short description of each article and the mode of preparing the tincture, spirit, or essence; (2) the amount and cost of material required; (3) a number of formulae, with the cost of each.

## MATERIALS, &amp;c.

*Almond Spirit.*

Oil of bitter almonds .. .. .	80 drops
Deodorised alcohol .. .. .	16 oz.

Procure the best cologne spirits or deodorised alcohol obtainable. Do not use common alcohol, as its odour is too strong and pungent for perfumers' use.

## AMBERGRIS.

This substance, which is found floating in the sea, or thrown up by the waves upon the shores of various countries, is now generally believed to be produced in the intestines of the sperm whale. The best grey ambergris is expensive but is the only sort worth buying.

*Tincture of Ambergris.*

Ambergris .. .. .	2 drachms
Powd. orris root .. .. .	2 "
Deodorised alcohol .. .. .	16 oz.

Grind the ambergris and orris in a mortar until reduced to a fine powder; transfer to a bottle and add the alcohol. Macerate for 30 days, and filter through paper.

## BENZOIN (BENZOINUM).

Benzoin is imported from Borneo, Java, and Siam. The tincture of benzoin has the property of adding permanency to some of the more fleeting odours.

*Tincture of Benzoin.*

	Oz.
Gum benzoin, in fine powder.. .. .	2
Deodorised alcohol .. .. .	16

Macerate for 30 days, and filter.

## BERGAMOT (CITRUS BERGAMIA).

The oil is obtained in Italy by expression from the peel of the fruit. It should be kept in a dark place and in a tightly corked bottle. If not well taken care of it soon loses its green colour, becomes cloudy from a deposit of resin, and acquires a turpentine smell. Care should be taken to preserve all oils as above directed.

## CASSIE (ACACIA FARNESIANA).

Cassie is cultivated in Southern France and Italy, and produces a very valuable perfume, resembling violets, but stronger.

*Essence of Cassie.*

	Oz.
Cassie pomade .. .. .	16
Deodorised alcohol .. .. .	q.s. or 16

Introduce the pomade and alcohol into a Mason fruit-jar of half-gallon capacity. Digest by means of a water-bath until the pomade is barely melted; shake well together, and repeat the shaking frequently until cold. Allow this to stand thirty days, then drain off the essence. If this falls short of 1 pint repeat with a sufficient quantity of alcohol to make up that measure. The washing can be continued and a second pint of essence obtained, which, although much weaker, may be found useful in a cheaper grade of perfumes.



## CLOVE (CARYOPHYLLUS).

The clove tree is one of the most elegant trees found in the Moluccas and other islands of the Chinese seas. Clove is a leading feature in some of the fine bouquets.

*Spirit of Cloves.*

Oil of cloves .. .. .	4 drachms
Deodorised alcohol .. .. .	16 oz.

## CITRONELLA (ANDROPOGON MADUS).

Oil of citronella is obtained by distillation from citronella grass, a native of Ceylon and India.

## CIVIT (FROM VIVERRA CIVETTA).

This substance is secreted by the civit cat. It is found in a large double glandular receptacle, between the anus and pudendum. The cat abounds in portions of Asia. Civit has a most disagreeable odour, but as a fixing substance, for giving permanence to the more fleeting odours, it is very valuable.

*Tincture of Civit.*

Civit .. .. .	1 drachm
Powd. orris root .. .. .	1 "
Deodorised alcohol .. .. .	16 oz.

Proceed as with tincture of ambergris.

## GERANIUM (PELARGONIUM CAPITATUM).

Geranium oil is obtained in Southern France and Turkey, from rose-leaf geranium.

*Spirit of Geranium.*

Oil of geranium .. .. .	Oz. 1
Deodorised alcohol .. .. .	15

## JASMINE (JASMINUM ODORATISSIMUM).

Jasmine is cultivated in Southern France and Italy. Its odour is so peculiar and fine, it cannot itself be imitated, but is used for imitating odours of other flowers.

*Essence of Jasmine.*

Use jasmine pomade, and proceed as with cassie.

## LAVENDER (LAVENDULA VERA).

The best oil of lavender comes from Mitcham, in England, where the plant is grown extensively.

## LEMON (CITRUS LIMONUM).

A good essence of lemon for dispensing, or for soda-water syrups, may be prepared as follows:—

Oil of lemon .. .. .	4 drachms.
Carb. magnesia .. .. .	4 "
Sugar .. .. .	4 "
Deodorised alcohol .. .. .	8 oz.
Water .. .. .	8 "

Dissolve the oil in 2 oz. of alcohol; triturate in a mortar with the magnesia and sugar. Gradually add the remainder of the alcohol and water, and filter.

## LEMON GRASS (ANDROPOGON CITRATUS).

Is a species of grass growing in India; on account of its odour resembling verbena, the oil is used for preparing the extract of verbena.

## MUSK (FROM MOSCHUS MOSCHATUS).

Musk is obtained from the musk deer, a small animal inhabiting the mountainous regions of Central Asia. Grain musk is the best form in which to purchase the article. Musk is used extensively in perfumes, both as a simple extract and for giving permanence to more fleeting odours.

*Tincture of Musk.*

Grain musk .. .. .	2 drachms
Hot water .. .. .	1 oz.
Deodorised alcohol .. .. .	15 "

Rub the musk to a fine paste with the hot water. Digest in a covered mortar for two hours, add the alcohol, and transfer to a tightly-corked bottle. Digest for thirty days and filter.

## ORANGE (CITRUS AURANTIUM. CITRUS BIGARADIA).

From the orange tree are obtained five distinct and valuable perfumes. 1. The true flower odour, obtained by digesting the flowers with lard. 2. Oil neroli petale or oil neroli bigarade, by distilling the flowers of the sweet and bitter orange respectively. 3. Oil of neroli petit grain, by distilling the leaves and unripe fruit. 4. Oil of orange Portugal, obtained by rolling the fruit in a metal cup covered with spikes, known as an ecuelle, which wounds the fruit and causes the oil to flow from the oil glands. 5. Commercial oil of orange, obtained by expressing or distilling the orange peel. The orange tree is cultivated extensively in Southern France, Italy, and Sicily.

*Essence of Orange Flowers.*

Use orange-flower pomade, and proceed as with cassie.

*Neroli Spirit.*

Oil neroli petale .. .. .	4 drachms
Deodorised alcohol .. .. .	16 oz.

## TINCTURE ORRIS.

Orris root pulverised .. .. .	Oz. 8
Deodorised alcohol, enough to make .. .. .	16 "

Prepare by percolation.

## PATCHOULY (POGOSTEMON PATCHOULI. LINDLEY).

Patchouly is a native of Selhet, a district of Bengal. It is also found in Java, Ceylon, and portions of China. The oil is distilled from the fresh herb. It has a very peculiar, musty, mossy odour; but when properly blended, forms a very fashionable perfume.

## PIMENTO.

The allspice tree is a native of the West Indies, Mexico, and South America. The oil is obtained by distilling the berries.

## ROSE (ROSA CENTIFOLIA).

The Turkish oil is the one commonly found in the market. Oil of rose should congeal at 80° Fah. When slowly cooled to 50° Fah. the oil becomes a transparent solid, interspersed with numerous slender, shining, iridescent, scale-like crystals (United States Pharmacopœia). The oil is obtained by distilling the flowers with water.

*Essence of Rose.*

Use rose pomade, and proceed as with cassie essence.

*Spirit of Rose.*

Oil of rose .. .. .	2 drachms
Oil of rose geranium .. .. .	1 "
Deodorised alcohol .. .. .	16 oz.

The oil of rose geranium is added to give permanence to the spirit.

## ROSEMARY (ROSMARINUS OFFICINALIS).

The rosemary plant is a native of the borders of the Mediterranean Sea. It is also cultivated in this country. The oil is one of the leading ingredients in cologne.

## SANTAL (SANTALUM ALEUM).

The oil is distilled from the wood, which is a native of Australia and the South Sea Islands.

*Spirit of Santal.*

Oil of santal wood .. .. .	2 drachms
Deodorised alcohol .. .. .	16 oz.

## TONKA (DIPTERIX ODORATA).

The tonka bean is the fruit of a large South American tree. When fresh they are very fragrant, having a strong odour of new-mown hay. They are exported from Para and Angustura. Tonka beans are used for scenting snuff; and by unscrupulous dealers for adulterating vanilla. And in perfumery in the form of tincture they enter into many of the leading bouquets.



*Tincture of Tonka.*

Tonka beans .. .. . 6 oz.

Deodorised alcohol, a sufficient quantity. Reduce the beans to a coarse powder; macerate in a corked bottle, with 16 oz. of alcohol, for thirty days. Then filter, and add enough alcohol through the filter to make the product measure 16 oz.

TUBEROSE (*PALIANTHES TUBEROSA*).

The tuberose is a native of the East Indies. It is cultivated for its perfume in Southern France. Its odour is very fine, and is a general favourite.

*Essence of Tuberose.*

Use tuberose pomade, and proceed as with cassie.

VANILLA (*VANILLA PLANIFOLIA*).

The best vanilla beans come from Mexico. Tincture of vanilla is used as a fixing ingredient in some perfumes.

*Tincture of Vanilla.*

	Oz.
Vanilla beans .. .. .	1
White sugar .. .. .	1
Deodorised alcohol .. .. .	16

Cut the beans into small pieces. Beat with the sugar in a mortar until they are reduced to a coarse powder. Macerate with the alcohol for thirty days, and filter.

VIOLETS (*VIOLA ODORATA*).

A very delicate odour, but very fleeting; by the addition of some of the stronger properties a very fine and popular perfume is obtained. Violets are cultivated in Southern France.

*Essence of Violets.*

Use violet pomade, and proceed as with cassie essence.

VITIVERT, OR KUS KUS (*ANDROPOGON MURICATUS*).

Is the rhizome of an Indian grass.

*Spirit of Vitivert.*

Oil of vitivert .. .. .	30 drops
Deodorised alcohol .. .. .	4 oz.

YLANG, OR IHLANG (*CANANGA ODORATA*).

This plant is found in the Philippines and the islands of the Indian Archipelago. The oil is obtained by distilling the flowers. The perfume is very characteristic and lasting.

*Spirit of Ylang.*

Ylang oil .. .. .	3 drachms
Deodorised alcohol .. .. .	16 oz.

In the following formulæ if the perfumes are too expensive the ambergris can be omitted and civit substituted, except in extract of ambergris. The musk can also be reduced in strength one half and still yield satisfactory results. In all cases secure the best goods, regardless of price. In perfumes as well as in medicines quality is of the first importance. When the perfumes are mixed they should be frequently agitated, and allowed to stand for two or three weeks before filtering. Age improves all perfumes if kept in a moderate atmosphere and in a dark place.

[N.B. The U.S. pint is the old wine measure, 16 oz.]

## AMOUNT AND COST OF MATERIAL REQUIRED.

Quotations here given were received by me, July 24, 1884:—

Deodorised alcohol .. .. .	5 gallons at \$2.40	\$12.00
Ambergris, best grey .. .. .	$\frac{1}{2}$ oz. at 27.00	3.38
Oil of bitter almonds .. .. .	$\frac{1}{2}$ " at 0.50	0.25
Oil of bergamot .. .. .	4 " at 0.10	0.40
Gum benzoin .. .. .	4 " at 0.03	0.12
Cassie pomade .. .. .	1 lb. at 2.25	2.25
Civit .. .. .	$\frac{1}{2}$ oz. at 2.25	0.56
Oil of cloves .. .. .	1 " at 0.07	0.07
" citronella .. .. .	1 " at 0.06	0.06
Jasmine pomade .. .. .	1 lb. at 2.25	2.25
Oil of lemon .. .. .	4 oz. at 1.40	0.35
" lemon grass .. .. .	1 " at 0.10	0.10
" lavender (Mitcham) .. .. .	1 " at 2.50	2.50
Musk, best grain .. .. .	$\frac{1}{4}$ " at 30.00	7.50

Oil of neroli petale .. .. .	1 " at 3.50	3.50
" " petit grain .. .. .	1 " at 0.50	0.50
" orange .. .. .	4 " at 0.11	0.44
Orange-flower pomade .. .. .	1 lb. at 2.25	2.25
Oil of pimento .. .. .	$\frac{1}{2}$ oz. at 0.21	0.12
" patchouly .. .. .	$\frac{1}{4}$ " at 1.03	0.25
" rose .. .. .	1 " at 9.00	9.00
" " geranium .. .. .	1 " at 0.50	0.50
Rose pomade .. .. .	1 lb. at 2.25	2.25
Oil of rosemary .. .. .	2 oz. at 0.10	0.20
" santal .. .. .	1 " at 0.50	0.50
Tuberose pomade .. .. .	1 lb. at 2.25	2.25
Tonka beans .. .. .	8 oz. at 2.03 p. lb.	1.00
Vanilla beans .. .. .	at 10.00	2.50
Violet pomade .. .. .	1 lb. at 3.00	3.00
Oil of vitivert .. .. .	$\frac{1}{2}$ drachm at 1.50	0.75
" ylang .. .. .	$\frac{1}{2}$ oz. at 8.00	4.00
Total .. .. .		\$34.90

## PERFUMERY FORMULÆ.

1

## AMBERGRIS EXTRACT.

	Oz.		Oz.
Spirit of rose .. .. .	3	Tincture of musk .. .. .	1
Tincture of ambergris .. .. .	8	" vanilla .. .. .	1

Cost \$6.7 per pint. Where permanence is desired this can be recommended. [U.S. 16 oz. For price calculate \$5 = 1

2

## ESS. BOUQUET.

Spirit of rose .. .. .	8 oz.	Oil of bergamot .. .. .	30 drops
Tincture of ambergris .. .. .	1 " "	" lemon .. .. .	60 "
" orris .. .. .	1 " "	" neroli petale .. .. .	15 "
Essence of cassie .. .. .	1 " "	Deodorised alcohol .. .. .	5 oz.

Cost \$2.18.

3

## FRANGIPANNI.

Tincture of musk .. .. .	5 oz.	Spirit of vitivert .. .. .	1 oz.
" civit .. .. .	4 drachms	Oil of santal .. .. .	60 drops
" orris root .. .. .	3 oz.	" neroli petale .. .. .	60 "
Ess. of orange flowers .. .. .	3 " "	" rose .. .. .	120 "
" tuberose .. .. .	3 " "	" " geranium .. .. .	60 "

Cost \$6.50 per pint. Where there is a demand for something lasting regardless of price, this will prove satisfactory.

4

## ROSE GERANIUM EXTRACT.

	Oz.
Oil of rose geranium .. .. .	1
Deodorised alcohol .. .. .	15

Cost 80c. per pint.

5

## HELIOTROPE.

Tincture of vanilla .. .. .	8 oz.	Spirit of rose .. .. .	3 oz.
" ambergris .. .. .	1 " "	Essence of rose .. .. .	3 " "
" civit .. .. .	1 " "	Oil of bitter almonds .. .. .	5 drops

Cost \$2.10 per pint.

6

## HONEYSUCKLE.

Essence of rose .. .. .	4 oz.	Tincture of tolu .. .. .	1 oz.
" violet .. .. .	4 " "	" musk .. .. .	1 " "
" tuberose .. .. .	4 " "	Oil of neroli petale .. .. .	3 drops
Tincture of vanilla .. .. .	1 " "	" bitter almonds .. .. .	2 " "
		Deodorised alcohol .. .. .	1 oz.

Cost \$2.80 per pint.

7

## JOCKEY CLUB.

	Oz.		Oz.
Spirit of rose .. .. .	4	Essence of jasmine .. .. .	1
Essence of rose .. .. .	1	" orange flowers .. .. .	1
" tuberose .. .. .	4	Tincture of civit .. .. .	2
" cassie .. .. .	2	" musk .. .. .	1

Cost \$2.50 per pint.



8

## LAVENDER EXTRACT.

Oil of lavender (Mitcham) ..	..	..	..	4 drachms
Essence of rose ..	..	..	..	2 oz.
Deodorised alcohol ..	..	..	..	14 "

Cost \$2.30 per pint. By using the common oil of lavender flowers the cost will be about \$1.20

9

## LILY OF THE VALLEY OR WHITE POND LILY.

Essence of tuberose ..	8 oz.	Essence of rose ..	2 oz.
" jasmine ..	1 "	Spirit of rose ..	1 "
" orange flowers ..	1 "	Tincture of vanilla ..	1 "
" cassie ..	2 "	Oil of bitter almonds ..	2 drops

Cost \$2.50 per pint.

10

## MILLEFLEURS (THOUSAND FLOWERS).

Spirit of rose ..	3 oz.	Tincture of orris ..	2 oz.
Essence of rose ..	1 "	" ambergris ..	4 drachms
" jasmine ..	4 "	" musk ..	4 "
" orange flowers ..	2 "	Oil of bitter almonds ..	3 drops
" cassie ..	2 "	" neroli petale ..	3 "
Tincture of tonka ..	4 drachms	" cloves ..	3 "
		" bergamot ..	120 "

Cost \$2.55 per pint.

11

## MUSK.

	Oz.
Tincture of musk ..	11
Spirit of rose ..	4
Tincture of civit ..	1

Cost \$5.90 per pint. This is rather a high-priced article, but the tincture of musk can be reduced one half with alcohol, and still yield a satisfactory result. The cost will then be \$3.25.

12

## NEW-MOWN HAY.

Tincture of tonka ..	6 oz.	Essence of jasmine ..	2 oz.
Spirit of rose ..	2 "	Oil of neroli petale ..	10 drops
Essence of rose ..	2 "	" rose geranium ..	60 "
		Deodorised alcohol ..	4 oz.

Cost \$1.65 per pint.

13

## NIGHT-BLOOMING CEREUS.

	Oz.		Oz.
Spirit of rose ..	4	Tincture of tonka ..	2
Essence of jasmine ..	4	" civit ..	2
		" benzoin ..	4

Cost \$1.65 per pint.

14

## ORANGE-FLOWER EXTRACT.

	Oz.
Essence of orange flowers ..	12
Essence of cassie ..	2
Tincture of musk ..	2

Cost \$3.20 per pint.

15

## PATCHOULY.

Oil of patchouly ..	75 drops
Oil of rose ..	15 "
Deodorised alcohol ..	16 oz.

Cost 75c. per pint.

## SWEET PEA.

	Oz.		Oz.
Essence of tuberose ..	5	Essence of rose ..	5
" orange flowers ..	5	Tincture of tonka ..	1

Cost \$2.50 per pint.

16

## CLOVE PINK.

Essence of rose ..	6 oz.	Spirit of orange flowers ..	4 oz.
" cassie ..	4 "	Tincture of vanilla ..	2 "
		Oil of cloves ..	10 drops

Cost \$2.40 per pint.

17

## RONDELETTA.

Tincture of musk ..	4 drachms	Oil of lavender (Mitcham) ..	2 drachms
" ambergris ..	4 "	" cloves ..	1 "
" vanilla ..	4 "	" rose ..	30 drops
Oil of bergamot ..	1 "	Deodorised alcohol ..	14 oz.

Cost \$2 per pint. With common oil of lavender flowers it will cost \$1.60.

18

## ROSE.

## White Rose (No. 1).

	Oz.		Oz.
Spirit of rose ..	8	Essence of jasmine ..	4
Essence of rose ..	3	Extract of patchouly ..	1

Cost \$2.50 per pint.

19

## White Rose (No. 2).

Oil of rose ..	2 drachms	Deodorised alcohol ..	16 oz.
" geranium ..	30 drops	Essence of jasmine ..	2 "
Essence of rose ..	4 oz.	Tincture of musk ..	1 "
		" ambergris ..	1 "

Cost \$3 per pint. Extract of white rose is a general favourite, and cannot be recommended too highly.

20

## MOSS ROSE.

	Oz.		Oz.
Spirit of rose ..	9	Essence of rose ..	2
Essence of orange flowers ..	3	Tincture of civit ..	1
		" musk ..	1

Cost \$2.85 per pint.

21

## TEA ROSE.

Essence of rose ..	4 oz.	Essence of orange flowers ..	1 oz.
Spirit of rose ..	8 "	Tincture of orris ..	1 "
" santal ..	2 "	Oil of rose geranium ..	20 drops

Cost \$2.20 per pint.

22

## SPRING FLOWERS.

Essence of rose ..	7 oz.	Spirit of rose ..	1 oz.
" violet ..	6 "	Tincture of ambergris ..	1 "
Oil of bergamot ..	1 drachm	Essence of cassie ..	1 "

Cost \$2.95 per pint.

23

## TUBEROSE EXTRACT.

	Oz.
Essence of tuberose ..	15
Tincture of ambergris ..	1

Cost \$2.85 per pint.

24

## UPPER TEN.

Tincture of vanilla ..	4 oz.	Spirit of rose ..	3 oz.
" ambergris ..	3 "	Essence of orange flowers ..	3 "
" orris ..	3 "	Oil of bergamot ..	90 drops
		" lemon ..	15 oz.

Cost \$2.75 per pint.

25

## VERBENA.

	Drops		Oz.
Oil of lemon grass ..	50	Essence of orange flowers ..	3
" lemon ..	320	" tuberose ..	3
" neroli petale ..	20	Spirit of rose ..	3
" orange ..	150	Deodorised alcohol ..	6

Cost \$1.90 per pint.

26

## VERBENA (NO. 2).

Oil of lemon grass ..	3 drachms	Oil of orange ..	30 drops
" lemon ..	4 "	Deodorised alcohol ..	15 oz.

Cost 60c. per pint.



## 27

## VIOLET.

	Oz.		Oz.
Essence of violets ..	11	Tincture of musk ..	1
" " cassie ..	2	" " orris ..	2

Cost \$3 per pint.

## 28

## VIOLET (NO. 2).

	Oz.		Oz.
Essence of cassie ..	6	Essence of tuberose ..	3
" " rose ..	3	Tincture of orris ..	3
		Spirit of bitter almonds ..	1

Cost \$2.5 per pint.

## 29

## WOOD VIOLET.

Extract of violets, (No. 2) ..	16 oz.
Oil of bitter almonds ..	15 drops

Cost \$2.10 per pint.

## 30

## YLANG-YLANG.

	Oz.		Oz.
Spirit of ylang ..	8	Essence of jasmine ..	2
" " rose ..	4	Tincture of civit ..	2

Cost \$2.70 per pint. This is my favourite; it combines fragrance and lasting qualities at a moderate price.

## 31

## WHITE LILAC.

Essence of tuberose ..	12 oz.	Tincture of civit ..	4 drachms
		Spirit of ylang ..	4 "
Essence of orange flowers ..	3 "	Oil of bitter almonds ..	3 drops

Cost \$2.50 per pint.

## THE RUSSIAN PETROLEUM INDUSTRY.

AT the monthly meeting of the Society of Chemical Industry, held at Burlington House, Piccadilly, on Monday evening, Mr. Boverton Redwood read a paper on the above subject. The lecturer gave an account of a personal visit, made last summer, to the Russian oil-fields, situate at Baku, and entered into a comparison of the industry there with the production of petroleum, which he had also witnessed, in the United States. He divided the lecture into (1) production, or the obtaining of the crude oil; (2) refining; and (3) distribution. The producing territory in Russia covered only a small area—not more than 3½ square miles—where flowing wells, or fountains, furnish lamp and lubricating oil. The petroleum deposits of Baku had probably been known for 2,500 years; the district had, undoubtedly, been frequented by the fire-worshippers from the time of Zoroaster, who lived 600 years B.C. There still exists a temple where the petroleum gas, rising to the surface, was ignited by the fire-worshippers, who termed the lights thus produced "the eternal fires." Describing the flowing wells, the lecturer said one of them was opened in his presence, and immediately, with a roar, a column of oil 1 foot in diameter shot to a height of 100 feet, or more, continuing to flow as long as the valve remained open, and forming a lake of oil. The spectacle was compared to the Falls of Niagara. One of the most famous wells, Drojba, flowed in this way for months, and was uncontrollable, the estimate being that from 68,000,000 to 136,000,000 gallons were ejected. In consequence of the impossibility of storing it, the oil thus thrown out was practically unsaleable, at a time when the same quantity of American crude oil was worth in the United States between 700,000*l.* and 1,400,000*l.* sterling. The most productive well ever known in the United States flowed for a time at the rate of 260,000 gallons per twenty-four hours, or only about one-eighth of the yield of the Drojba Well. The production of crude petroleum for 1884 amounted in Russia to 1,130,000 tons, and in the United States to about 3,000,000 tons. The oil was at present conveyed from the wells at Baku to the refiners in pipe lines, having a carrying-capacity of more than 700,000,000 gallons,

The total quantity of refined kerosene manufactured in 1884 was 241,900 tons. Liquid fuel in the form of petroleum was used on more than 100 steamers on the Caspian Sea, as well as in the locomotives on the Trans-Caucasian and other railways. The great advantage of liquid fuel for metallurgical purposes was also alluded to, and specimens were exhibited for the first time of pure wrought iron melted and cast by the use of petroleum as fuel. A description followed of the tank system of distributing the oil, the lecturer's opinion being that, without the adoption of this system, the petroleum trade in Russia could not have reached its present magnitude. The difficulties attending the transport of oil from Baku to Batour on the Black Sea were next pointed out, and the necessity was urged of improving the means of communication before Batoum could become a very important place of shipment. In conclusion, the two principal routes to Baku (1) *via* the Black Sea and the Trans-Caucasian Railway, and (2) *via* the Volga and the Caspian Sea, were described. For those travellers who had time at their disposal the lecturer recommended a circular tour. The shortest route, however, from London was *via* Berlin, Odessa, and Batoum; the distance was 2,500 miles, and Baku could be reached in ten or twelve days, without material discomfort or fatigue. A brief discussion followed, and a vote of thanks to the lecturer brought the meeting to a close.

## TRADE MARKS APPLIED FOR.

THE *Trade Marks Journal*, February 11, 1885, gives the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications relating to patents, designs, or trade-marks to be addressed to H. Reader Lock, Esq., Comptroller-General of Patents, Designs, and Trade-marks, Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "*Trade Marks Journal*," January 14, 1885.

"THE NATIONAL BLUE IN SQUARES," in white letters on a black ground, for washing blue. Hargreaves Bros. & Co., Cleveland Street, No. 32,447.

"CONDENSED WHITECROSS MILK," with label, &c., in English and French. Marcel Renouard, trading as "M. Renouard d'Adrien," 17 Rue de l'Echiquier, Paris. No. 37,991.

"LEATHER'S INDIAN HERB PILLS," and design. John Hy. Leather, 166 Great Jackson Street, Hulme, and at Manchester. No. 38,557.

"COSMETIQUE SURFIN" and design, for a cosmetic in sticks (39,883, used eighteen years before 1875); "IXORA BREONI," scent for handkerchief (39,876, used six months before 1875); picture of basket of flowers, for perfumery and scented soaps, also the signature "E. Pinand" (39,837 and 41,374, used thirty-five years before 1875); *ess. de violettes* (41,375, used twenty years); *extr. à l'ixora*, for the hair (39,879); *eau de quinine tonique*, for the hair (39,830, used seventeen years); and two other labels for scents (39,881, used two years, and 39,882). Emile Meyer & Co., 37 Boulevard de Strasbourg, Paris, France.

"EXAMINED AND APPROVED BY THE DIRECTOR OF THE SCIENTIFIC DEPARTMENT," with signatures "Max Pettenkofer and Mr. Liebig," delegate in two forms. Liebig's Extract of Meat Company (Limited), 9 Fenchurch Avenue, London. Nos. 39,984 and 39,985, used eight years before 1875.

"MELANYL," for marking-ink. Cooper & Co., 5 Shoe Lane, E.C. No. 40,217.

"CRITCHLEY'S STARCH GLOSS," white letters on black ground. Thos. Critchley, 10 King William Street, Blackburu, Lancs. No. 40,376.

"THE CHILDREN'S LIFE PRESERVER—EDGAR'S CROUP LOTION," with label. Susannah Edgar (daughter of the late Jas. Edgar), Westfield House, Dartford, Kent. No. 40,399.

"PERSIAN SHERBERT, PREPARED BY CASTELL & BROWN, LONDON," with label. J. W. Sully, 78 Queen Victoria Street, E.C. (accountant), and F. B. Brown, 14 Pennywen Road, South Kensington (gentleman). No. 40,359.



"CHIROPODINE, THE NEW REMEDY FOR CORNS AND WARTS." Alexander Allan, 4 Church Street, Inverness.

LANGTON, EDDEN, HICKS & CLARK, with a design for a trade mark for drugs, 230½ Upper Thames Street, E.C.

NURSE PHILLIPS'S PILLS. Edwin Alewood, Castle Square, Swansea. No. 40,387.

NON-ALCOHOLIC AERATED PICNIC ALE, a beverage. George Brown & Son, 17 Drake Street, Rochdale. No. 41,011.

RELIANCE GREASE EXTRACTOR, with label, for powder for cleaning silk fabrics. Henry Melliship, "Shallimar," Horn Lane, Acton, Middlesex. No. 41,039.

ZOEDONE, for medicated beverages, elixir, and biseuits, and for aerated waters, and elixir for making aerated waters. Zoedone Company (Limited), 80 Coleman Street, London. Nos. 41,198, 41,199, 41,587.

CARMEX, for cigarette-making apparatus. Frank Bloor, Crooksmoor Road, Sheffield. Nos. 41,232.

GOLDEN, for common soap. Hodgson & Simpson, Calder Soapworks, Wakefield, Yorks. 41,303.

WASSAIL, for non-alcoholic syrup for making temperance beverages. Hy. Wileox, trading as "R. Lake & Co.," 45 Gibbons Street, Plymouth.

*From the "Trade Marks Journal," January 21, 1885.*

"KHOOSH, A NEVER-FAILING APPETISER," with design, tonic medicine, and bitters. Hy. Davis, trading as "Hy. Davis & Co.," 12 Gorce Piazzas, Liverpool. Nos. 40,288 and 40,289.

ACME, for common soap. Arthur & Sons, 1 and 2 Bridewell Street, Bristol. No. 40,683.

"P. P. PARAGON PASTE," for removal of old paint. Paragon Paste Company, Fish Street, Kirkgate, Leeds. No. 40,711.

THE GRANT REVOLVING-BALL WATER-FILTER, for filters. The Revolving-ball Filter Company (Limited), 67 St. James Street, Middlesex. No. 40,787.

INSECT DEATH R. W. on picture of a moth, for an insecticide. Jas. R. Ward, trading as "Rowland Ward," 166 Piccadilly, London. No. 40,798.

WALKER'S S. P. CHARCOAL, for a manure. Wm. Walker, Heaton, Mersey, Lanes. No. 40,992.

J. U. URMSTON HARWOOD, and design, for mineral and aerated waters. Jas. Urmston, Down Green, Harwood, near Bolton, Lanes. No. 41,150.

THE FAIRCHILD, for chemical substances used in pharmacy and for foods. Burroughs, Welleome & Co., Holborn Viaduct, E.C. Nos. 41,193 and 40,194.

B. & K., and design of wings, &c., for grained, dry photo-plates. Brunner & Kunkler, 33 Klybec Strasse, Bale, Switzerland. No. 41,280.

SPARKLING "BELL" BLAND, a preparation of milk. Aylesbury Dairy Company (Limited), 31 St. Petersburg Place, W. No. 41,396.

THE UNIVERSAL SAMPLE-BOX, and picture of a screw for boxes, partly made of metal. Thos. Christy & Co., 155 Fenchurch Street, E.C. No. 41,459.

Picture of Mercury on the Globe, for condensed milk. Synazio Grifa, Locate Triulzio, near Milan, Italy. No. 41,528.

HYPERION, for skin, teeth, and hair. Robert Morrison, First Avenue Hotel, Holborn, W.C. No. 41,556.

PICTURE OF TWO MEN, as trade-mark, for mineral and aerated waters. Mary Whittaker, Matlock Dale, Matlock Bath, Derbyshire. No. 41,575.

*From the "Trade Marks Journal," January 28, 1885.*

WILLIAM WARD, AND THE WORDS "EXTRACT OF SOAP, OLIVINE SOAP, AND DRY SOAP," with labels, for extract of soap, powdered and liquid soap, and dry soap. Wm. Ward, 75 Hall Road, Handsworth, Staffordshire. Nos. 39,908, 39,999, 39,100.

HOLMES' OZONE FLUID, used in photography and manufactures (No. 40,645); also for sanitary purposes (No. 41,342), and a rinsing and bleaching fluid (40,646). HOLMES' OZONE, with a label, for a disinfectant (No. 41,621), trading as "J. R. Holmes & Co.," 12 Waterloo Street, Glasgow.

LITHOLYDIUM ZACHARLE, and picture, medicine for human use. Gust. Mellin, Marlborough Works, Stafford Street, Peckham, S.E. No. 40,298.

CARBONATED DOG-BISCUITS, with signature. Walker & Harrison, Phoenix Biscuit-works, Ratcliffe Cross, E. No. 41,090.

BYNIN, LIQUID MALT, as medicine and as food. Allen and Haubury, Plough Court, Lombard Street, E.C. Nos. 41,136 and 41,137.

ZYMOLIS, INTERNAL DISINFECTANT, medicinal preparation. Fr. Geo. Johnson, Reigate Grammar School, Reigate, Surrey (schoolmaster). No. 41,409.

THE COURT SAUCE, by J. H. Woodward (soleitor), trading as the "Court Sauce and Pick'e Company," Vincent Parade, Balsall Heath, Birmingham. No. 41,461.

CONDY'S FLUID, for sanitary purposes. Condy & Mitchell (Limited), 67 and 68 Turmill Street, E.C. Used eighteen years before 1875. No. 41,529.

THE TROPICAL, for feeding bottles, &c. Thompson, Millard & Co. (Lim.), Curtain Road, Great Eastern Street, E.C. No. 41,532.

POSENER'S EDIBLE PILLS, for human use. Ad. Posener, 61 Mansell Street, Goodmans Fields, E. No. 41,542.

FAWCETT'S LAMB CAKE, HULL, on a design; a food for lambs. Thos. Fawcett & Co., 191 Coltman Street, Hall, Yorkshire. No. 41,581.

COMFORTINE, a child's medicine. Edw. Machon, 25 Park Street, Derby. No. 41,658.

BLANCHINE, for bleaching cotton, &c. John Sellars, trading as "East Lancashire Chemical Company," Fairfield, Manchester. No. 41,677.

LAVALINE, for household washing purposes. Walter Kaye, Methley, near Leeds. No. 41,696.

WRIGHT'S POULTRY EGG-PRODUCING POWDER, a medicine for poultry. John Hy. Wright, Eastbrooke, Rawdon.

VICTORIA, for common soap. Victoria Soap Company (Limited), Plymouth.

*From "Trade Marks' Journal," February 4, 1885.*

A picture of a heart and a cherub's head, for aerated waters. Ar. Ev. Tyler, trading as "Champion Mineral Waters Company," Wilmer Gardens, Kingsland Road, E. No. 37,222.

COMPOUND OXYGEN, medicine for human use. Wm. Garner, sole proprietor, Sandhill House, Frodsham, Cheshire. No. 38,956.

DR. BULL'S CELEBRATED COUGH-SYRUP, with labels. Ad. C. Meyer, trading as "A. C. Meyer & Co.," Baltimore, Maryland, U.S.A. No. 39,722.

GOLDEN PORRIDGE MEAL, with design. John Beal, 162 High Street, Camden Town, N.W. No. 40,054.

YE RECHAB WINE, an aerated water. Guy Middleton, trading as "Maugham's Mineral Waters Company," 47 Clapham Road, S.W. No. 40,337.

SALUTINE, medicinal preparation, also as toilet and nursery powder. Thos. Gills Gibbons, 41, Market Street, Manchester. Nos. 40,705 and 40,706.

MEDICATED HERBAL COUGH TABLETS, and a label. Stephen Cox, 43 Chapel Street, Islington, N. No. 40,715.

THE CHARTERHOUSE, for photographic glass. Photographic Artists' Co-operative Supply Association, trading as the "Photographic Artists' Stores," 43 Charterhouse Square, London, E.C.

MASTERMAN'S, and design, and MASTERMAN'S, alone, for shoe-polish. East, Kinsey & East, Carmarthen Works, Bermondsey Street, S.E. Nos. 41,089 and 41,934.

ANTS' EGGS, food for all kinds of fish. Timothy Brigden, 52 King William Street, E.C.

DERBY HORSE AND CALF SPICE, cattle medicine. Thos. Taylor, Hartington Street, Derby. No. 41,216.

HOGSHEAD BRAND and stencil, for farinaceous substances used in food. Alf. Chas. Ashby, 23 Laurence Pountney Lane, E.C. No. 41,255.

AELLYTON, for ink. H. C. Stephens, 191 Aldersgate Street, E.C. No. 41,265.

THE INVICTOR PYRO DEVELOPER, for photo-plates. John William Jones, 138 and 139 Palmerston Buildings, Old Broad Street, E.C. No. 41,424.

TRYPOGRAPH, copying apparatus. Zucato & Wolff, 15 Charterhouse Street, London.

FAIROLENE, a jelly or hair pomade. Fairbairn & Co., 4 Bath Parade, Bristol. No. 41,577.

THE KIMMERIDGE and KIMMERIDGE SANITARY CARBON, with label, disinfectants and deodorisers. Nos. 41,579 and 41,578.

HUME'S HORSE-BISCUITS. Dav. Hume & Son, Commercial Street, Dundee. No. 41,672.

VICTOR SPERM, oils used in manufactures. John S. Morris & Son, Victoria Bridge Oil-works, Manchester.



- GUY'S TONIC, and label, patent medicine. Thomas Guy, trading as "Guy's Tonic Company," 6 Sloane Square, Chelsea, London. No. 41,811.
- ESKELL'S SMOKERS' TOOTH-POWDER. Edward Eskill, trading as "Eskill & Sons," 445 Strand, W.C. No. 41,852.
- THE OTTOMAN RELISH, for foods. Sidney Waters, trading as "Waters & Son," 34 Eastcheap, E.C. No. 41,878.

*From "Trade Marks' Journal," February 11, 1885.*

- A series of oval labels, with name and address round the oval, a picture, and the words "Pure soda-water, potass-water, lemonade, ginger ale, seltzer water, and tonic water." M. B. Foster & Sons, 242 Marylebone Road, London. No. 40,274.
- MUSTARDYNE, for mustard. J. J. Schweizer, trading as "William Clarke," 5 Upper Pownall Street, Park Lane, Liverpool. No. 40,475.
- "CO-OP," on picture of a basket, substances used in medicine and pharmacy. Wm. Carr Hebben, Winding Road, Halifax. No. 40,953.
- A. B. C., in loops of rope, for chemical substances used in medicine and pharmacy. Thos. Bowick, Bedford. No. 41,165.
- ANTIVENUM CAJUPUT LOZENGES. John Broad & Son, Rise House, Hornsey Rise, London, N. No. 41,217.
- S. C. and a design, for stoppers for bottles. W. T. Henley's Telegraph Works Company (Limited), 8 Draper's Gardens, E.C.
- THE DIAPHANOUS HAIR-REVIVER. Timothy White, 160 Commercial Road, Portsmouth, Chemist. No. 41,359.
- ORANGE CHAMPAGNE, with name and design, an aerated water. Reynolds & Branson, Commercial Street, Leeds. No. 41,453.
- CONDENSED MILK, THISTLE BRAND, and picture of a thistle. W. Harrison & Son, 10 and 14 Philpot Lane, London. No. 41,501.
- COLZALINE SWEET OIL, E. R. BANNER, LIVERPOOL, 56 Boaler Street, a lubricating and illuminating oil. No. 41,589.
- HUDSON'S, in a design (No. 41,631), a series of concentric rings enclosing a design (No. 41,632), both for common soap and detergents generally; HUDSON'S EXTRACT OF SOAP, with a design (No. 41,633), for extract of soap, dry soap, and soap powder. Firm trading as "R. S. Hudson," Bankhall, Liverpool.
- ICE, on a picture of a block of ice. Wm. Bell Harrison, 6 Bridge Street, Sunderland. No. 41,717.
- CHERRY-BLOSSOM TOILET-POWDER (No. 41,752), CHERRY-BLOSSOM SOAP (No. 41,753). John Gosnell & Co., 93 Upper Thames Street, London.
- WHEEL BRAND and a design, for all fermented liquors (No. 41,890); also for mineral and aerated waters (No. 41,891). Walter James Wheeler, trading as "Wheeler & Co.," Eliza Street, Belfast.
- Design of three anchors intertwined, for starch. George Smith, Anchor Works, Bow Bridge, E. No. 41,922.
- HOLMES' OZONE COMPANY, FOR RINSING, BLEACHING, AND DISINFECTANTS, and a design. J. R. Holmes, trading as "The Company," 12 Waterloo Street, Glasgow. No. 41,961.
- REVIVIDUS, for a hair-restorer. James Watkinson, Church Street, Preston, Lancs., hairdresser. No. 42,107.



ESKELL'S TOOTH-POWDER.

MESSRS. ESKELL, the well-known dentists, of Ludgate Hill and the Strand, have lately introduced a tooth-powder which seems to possess many good qualities. It appears to be just sufficiently saponaceous to ensure good cleansing properties, while a rose flavour is all that is experienced by the palate. A smoker's tooth-powder is another variety of powder introduced by the same firm. Both powders are packed in Messrs. Eskill's patent boxes, the peculiarity of which is that the top is roof-shaped, with a slit at the top, out of which the powder can be sprinkled on to the toothbrush. A lid covers this top when the box is not in use. Consequently two or more persons can use from the same box with propriety.

### FERGUSON'S PATENT DENTIFRICE-SPOON.

THIS is another patent device for a tooth-powder receptacle. As shown in the drawing, it consists of a rather narrow-mouthed bottle, well fitted with a round cork, into which is riveted a trowel-shaped spoon, with raised sides. The spoon



reaches to the bottom of the bottle, and offers a convenient and cleanly mode of taking dentifrice from the bottle, while the arrangement of the cork ensures that the powder shall be kept quite air-tight.

### POCKET-CASE OF HYPODERMIC TABLETS.

THIS remarkably convenient arrangement will be appreciated by any medical practitioner who has adopted the modern system of hypodermic administration. It is introduced by Messrs. Burroughs, Welleome & Co., and, like all their productions, combines the highest quality with the utmost elegance. The case is made of morocco, lined with silk, and is fitted with all the appliances necessary for at once obtaining a fresh and accurately-dosed hypodermic solution. A

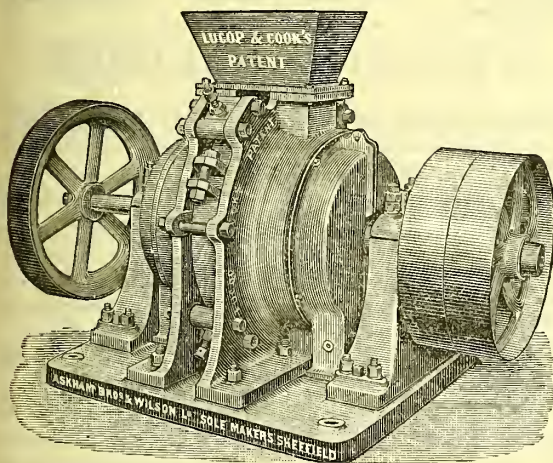


dozen small tubes contain various tiny compressed tablets, presenting in easily soluble form the medicaments usually employed. These can be varied as required. A graduated hypodermic syringe, with every arrangement for keeping the needles scrupulously clean, and a very small glass pestle and mortar for at once dissolving a tablet, are contained. The tablets are made up with  $\frac{1}{4}$  grain of sodic sulphate in each, which is an inert vehicle, and which promotes solution. It is now recognised that there is an absolute danger in using hypodermic solutions in which any fungoid growth has developed, and this can only be surely avoided by always preparing a fresh solution when used. Of course, the tablets can be administered by the mouth, if preferred.



## LUCOP &amp; COOK'S CENTRIFUGAL PULVERISER.

MESSRS. ASKHAM BROS. & WILSON (LIMITED), Yorkshire Steelworks, Sheffield, are the sole manufacturers of this machine, which appears to combine simplicity with effectiveness in a high degree. The advantages claimed for these pulverisers are, that they occupy very little space, that they require very little power to drive them, and that the degree of fineness to which it is desired to reduce material is not fixed but optional, the capabilities of the mill extending from a coarse to an impalpable powder, making it particularly suitable for use in chemical and colour works, and in many cases to chemists and druggists in general. For the use of the latter we were shown a very neat adaptation of the principle, in the shape of a small machine to work by



hand, which, being simple in construction and easy, can be worked by a boy, and will probably meet an important requirement in the retail trade. To give purchasers an opportunity of seeing the machines in operation, the manufacturers have erected at their works mills of various sizes, which they are glad to show. They also invite intending purchasers to send them one or two cwt. of any material they wish to reduce, and the firm will return the drug pulverised to any degree of fineness that may be specified. Our illustration represents a complete specimen of this mill.

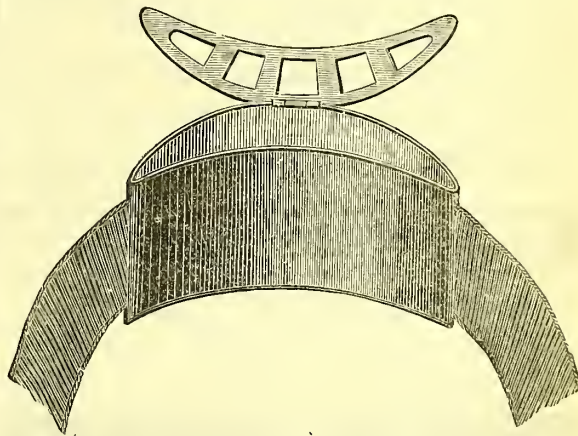
## NEW FILLING-APPARATUS FOR PATENT STOPPERED-BOTTLES.

MR. N. G. WILCOCKS, of Bath, has lately patented an apparatus, likely to be of great service to the manufacturers of aerated waters. It is a machine for bottling with the now universally used patent-stoppers, which exhibits several improvements over those ordinarily in use. The name of the machine is "The Climax Patent Turn-over Filling-machine"; and one of its chief novelties is an ingenious arrangement for regulating the supply of syrup and flavouring, which most of the aerated waters require. By simply turning the screw the action of the pump is regulated so as to admit the full or a less quantity or none at all of the syrup, which is contained in a receptacle at the back of the machine. Another improvement is that the "sniffings," instead of being ejected over the person of the bottler, are carried off through pipes into a receptacle for the purpose. The bottler is protected from the flying glass, when the bottles happen to burst, by a perforated guard placed over them. Thus, by one turn of the machine, the syrup is injected in the desired

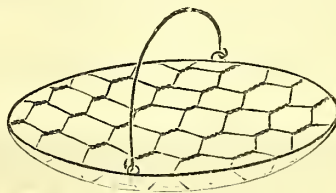
quantity, then the aerated water, and finally the stopper falls into place, while if the stopper should happen to fall edgewise instead of straight a quarter turn of the machine will rectify the error without wasting any of the contents of the bottle.

## ANTISEPTIC GENERATOR.

THIS novelty is manufactured by Messrs. Lynch & Co. from the design of Dr. Taylor, of Anerley, and is intended to provide an antiseptic treatment of consumption, whooping-cough, asthma, hay fever, and other diseases of the throat, lungs, and air-passages. Dr. Taylor acts on the theory which has been promulgated that an antiseptic respirator over the mouth provides a convenient lodging-place for germs, and conse-



quently he proposes that the antiseptic generator shall be worn on the front of the body outside the clothes. It is attached to a waistband, and, being of black metal, need not be very prominent. The generator is loosely packed with cotton-wool, which is saturated with the antiseptic medium. The preparation recommended by Dr. Taylor, and supplied with the instrument, is a mixture of thymol, creasote, carbolic acid, and acetic ether. The generator is constructed so



as to ensure an upward current of vapour from this mixture, and thus it is intended that the patient shall be constantly breathing a germicidal atmosphere. For night use a slight wire basket is provided on which a piece of lint is spread. On this a few drops of the compound are poured, and the basket is hung in a convenient position. The apparatus complete is packed in a cardboard box to sell for 5s.

**OXYGENATED WATER.**—We described in December last, page 628, the process employed in Paris by Messrs. Brin Frères for the economical production of oxygen gas. That firm have now commenced to supply distilled water charged with oxygen, under pressure of 300 lbs. to the square inch, in syphons for table use. M. Dujardin Beaumetz lately brought some samples of this product before the Société de Thérapeutique, and stated that he had found it very serviceable in cases of loss of appetite and in other digestive and urinary disorders. It can be given either pure or mixed with wine.





OFFICE - 42 CANNON STREET, LONDON, E.C.

## "SANITAS."

### THE BEST DISINFECTANT.

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## EDITORIAL NOTES.

### THE INTERNATIONAL PHARMACEUTICAL CONGRESS AT BRUSSELS.

CONSCIENTIOUS pharmacists are likely to have a splendid opportunity for the display of activity and devotion to their profession in the course of the current year. According to present arrangements the International Pharmaceutical Congress at Brussels will be held from August 31 to September 6 inclusive. The British Pharmaceutical Conference at Aberdeen will follow on September 8 and 9. We believe some correspondence has passed between the Belgian Committee and some British officials; but we are told that important considerations will prevent any alteration of the date of the Congress.

The Brussels Committee of Organisation are very cordial in their invitation to the Congress. We are expressly requested to give publicity to their programme, and to press all pharmacists and other persons who interest themselves in pharmaceutical sciences to take part in the proceedings. We may add here that any communication in reference to the Congress should be addressed to M. Van de Vyvere, Secretary-General, 14 Montagne-aux-Herbes-Potagères, Brussels.

We observe with much pleasure that the organisers of the Congress have fixed a price to be paid by all who take part in



the Congress. The sum to be charged is a very moderate one (8s.), and we believe it will be much more agreeable to any visitors from this country to pay some quota of the expense, rather than feel that they have thrown a most unfair burden on a very small section of their associates.

The subjects put down for discussion do not strike us as full of interest, but the Congress will have plenty of interest of its own apart from its labours. At the same period the International Exhibition at Antwerp will be at its best, and the final session of the Congress is to be held in the latter city.

It is expected that a special reduction on railway rates in Belgium will be granted to members of the Congress, and in all respects it is evident that all will be done which can be done to make the trip a pleasant and useful one.

### ALTERING THE EXAMINATION.

THE process of modifying the regulations for qualifying a chemist and druggist in this country is so marvellously complicated and ponderous that the question must occur to many minds whether the result is likely to be worth the labour. The examination portal through which every man must pass before he can assume the full responsibilities of pharmacy seems to be at present so far closely guarded that only about one in three of those who try can get through them. There is no very definite cry of unfairness even from the other two; while, as for the public interests, they are jealously watched over by a very careful and competent representative of the Privy Council, even if the proportion of rejections just indicated should seem to leave room for any suspicion of looseness. So that it can hardly be said that there exists any glaring necessity for all this trouble that is being taken. But, say the advocates of the scheme, it is out of kindness to those two-thirds of the candidates who show themselves so unprepared that we want to establish these new regulations. Clearly they ought to be put through a curriculum; and, besides, they would get through the examinations more easily if we were to give them the subjects in two divisions. Granting all this, as a matter of pharmaceutical economy, the argument is not a strong one. If it is only their interests which are thought of, it must be remembered that young men can get as much curriculum as they want now, and that, as a matter of fact, most of them do avail themselves of more or less; and the natural laws of supply and demand may be trusted to provide sufficient competent pharmacists for the future, independently of any nursing on the part of any society.

The division of the qualifying examination into two altogether separate sections is a proposal which has been agreed to by a number of highly-competent authorities, but which, either in principle or in detail, seems likely to occasion some lively difference of opinion even yet. An examination for honours may be taken in as many sections as may be found convenient, but it is assuredly a proper principle that a candidate for an examination for a certificate of fitness for a certain occupation should be able to pass the whole of it at one time. This principle, however, does not seem to have been much infringed in the scheme now before us. The subjects of the first section—theoretical chemistry, pharmacy, and translating prescriptions—are neither of them distinct from subjects which will come before the candidate when he finally presents himself. He cannot, therefore, cram up for the first part and then as quickly as possible disgorge what he has learned, so as to make room for the remaining subjects. That is certainly what he would do if, for instance, such distinct subjects as botany and chemistry were put into separate sections. But, then, it must be

remarked that the plan of passing a candidate through a subject, and afterwards through the same subject extended, partakes very much of the philosophy which makes one hole for the cat and a smaller one for the kitten. The only argument in its favour is that used by Mr. Carteighe, namely, that it will induce apprentices to study more closely in the first year or two of their business career.

Mr. Martindale has advocated, with no little force, that practical dispensing should be a subject of the first part of the Minor, and Mr. Greenish would appear to support that view to some extent. It is argued that in the first few years of an apprentice's life the practical part of his work should predominate, and that he should show his proficiency in manipulation before he enters on the more scientific studies which his business is supposed to require. The first examination would then, as Mr. Martindale says, have a commercial value to the man who had passed it. It would stamp him as a qualified assistant. But the argument against that opinion is, we think, overwhelmingly strong. A certificate of having passed a sufficiently severe examination in dispensing renders any other certificate superfluous; it stamps a man as a qualified pharmacist. As Mr. Symes says, "It is a subject on which a severe examination was required to be passed, and when a man had done that they had no right to ask much more of him." Surely this, the essential subject of a pharmacist's knowledge, should form part of the examination which declares him qualified.

The chance of the Privy Council consenting to the modifications which are proposed seems doubtful, and there is a curious reticence about the legal advice the Council have received as to their power of making the alterations by means of by-laws. It can hardly be supposed, however, that all this trouble is being taken without first ascertaining that official sanction may be expected. If something to this effect has not been secured, these prolonged cogitations and discussions have been merely academic exercises, not conducive to the reputation of the Pharmaceutical Council as a business-like body.

### PHARMACEUTICAL STATISTICS.

THE number of names on the register of pharmaceutical chemists and chemists and druggists remains curiously constant. Something over 13,000 and under 13,500 seems to have been the number of qualified men in Great Britain ever since the Pharmacy Act was passed. This number includes all who are qualified by law, and is of course much larger than the number actually in business. The population has increased, the pharmaceutical body has not advanced; ruin, we are told, has been busy among them, but the total has not been reduced. Last year 328 new names were added to the register after examination, though 382 persons sought registration. Another 612 persons passed the Preliminary examination during the year, while 654 others tried to do so and failed. If 328 be anything near the normal number required yearly to fill up the ranks, the proportion of pharmaceutical failures—that is, of persons who enter pharmacy but never get a footing in it—must be enormous, and is somewhat appalling. On such a basis it may be assumed that of the 612 apprentices registered during 1884 not much more than half will ever reach the somewhat modest position they are aiming at, and this calculation requires us to suppose that nearly all the 654 others will miss their aim. To consider what becomes of all these would be too long an inquiry for our present purpose. Meanwhile, it remains to be noted that only 81 persons sought Major honours in 1884, and that of these only 41 secured them. Out of 13,400 names on the register, only 2,235 are pharmaceutical chemists, and of these only 1,617 are in association with the Pharmaceutical Society.



## CHEMISTRY AT THE INVENTIONS EXHIBITION.

WE are gratified to learn that the Council of the Society of Chemical Industry have resolved to organise a chemical section in the forthcoming exhibition of modern inventions which is to take place at Kensington during the summer. A Committee have been appointed by the Council of the Society, and the Executive Council of the exhibition have placed sufficient space at the disposal of the Society, and promised assistance to the committee in the organisation of their exhibits. The committee deem it desirable that, in addition to the usual way of exhibiting chemical processes by exhibiting raw materials, intermediate and finished products, the plant employed should be shown—by means of models, wherever possible, or else by means of large coloured diagrams. With respect to the latter, the committee specially recommend coloured perspective drawings, showing the general arrangement of the plant in operation. The committee therefore invite members of the Society who own or work chemical inventions, patented or introduced since 1862, which they may wish to be exhibited under the auspices of the Society, to communicate with the honorary secretary of the committee, Mr. Ludwig Mond, Winnington Hall, Northwich.

## PUBLIC ANALYSTS' REPORTS.

MR. CARTER BELL, the Salford Borough Analyst, who, it appears, still continues to ventilate his peculiar chemical theories at the public expense, has lately furnished a striking illustration of the value of the statistics of adulteration which are afterwards published in an official form by the Local Government Board, and to which members of Parliament, editors, and others turn when they wish to make sensational speeches or articles.

Last December Mr. T. R. Jeans, a chemist and licensed dealer in British wines, of Pendleton and Salford, was prosecuted by Inspector Thompstone for having sold to him bottles of "Universal" old port and sherry wines which were "not of the nature, substance, and quality demanded." It was proved that the wines were described as "British" on bills pasted on the window, and the inspector asked for such wines as were in the window. He paid 1s. 10d. each bottle for them. Mr. Carter Bell said he had made a careful analysis of the sherry wine, and found it differ from sherry wine made from the pure juice of the grape, in that it contained a much smaller percentage of ash. In cross-examination he admitted that in his opinion such a wine as he described made from the pure juice of the grape did not exist in commerce. He recognised Dr. Hassall as an authority, and had to admit that some of Dr. Hassall's analyses showed smaller percentages of ash than were found in the wines under trial. The defendant was then heard, and it was proposed to bring forward Mr. B. Robinson, the maker of the wines, but the magistrate (Mr. Makinson) interposed, saying that further evidence was not necessary. These wines were sold as British, and there had been no intention to defraud.

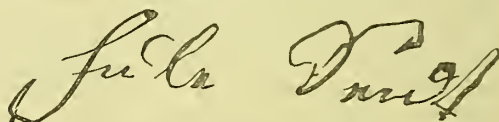
Such is a fair summary of the case. Now, in Mr. Carter Bell's official report for the quarter ending December 31, 1884, he states that 137 samples had been analysed, of which 5 samples of milk and 2 of wine were found to be adulterated. Mr. Bell stated that the wine was labelled "fine old port" and "fine old sherry, but it was innocent of the juice of the grape, and was manufactured in Salford."

It is hardly credible, it is certainly not creditable, but it would seem to be almost certain that the wines referred to were those of the case we have summarised. Mr. Robinson,

the maker, wrote to a Manchester paper on the subject, and it does not appear that Mr. Bell has explained that he was referring to some other wines. If the borough analyst has used his official position thus to reverse the decision of the Court, and to give himself a verdict most properly refused by a competent authority, he has, as Mr. Robierson says, insulted the magistrate and libelled the manufacturer. But it is as well to remember that these two samples of wine will go down to posterity in Sir Charles Dilke's next Blue-book as adulterated, though there does not seem to have been the least evidence to prove any fault against their quality.

## PRESCRIPTION READING.

THE *Weekly Drug News* (New York) lately published the following *facsimile* of a physician's order received by a druggist in that city, and invited guesses as to the meaning. In a subsequent number seventeen replies were published. In view of these "Fuller's earth" was suggested as the correct reading. Most of the writers of these answers bore German names, and their theory was that the prescriber,



being a German, was trying to represent in German characters the sound of the English words by "fula serdt." Three solve the problem as "pulv. seidl." (seidlitz powders), and others read "pulv. sinapis," "tollu tinet.," "oil seent" (seented oil), "huile seide" (oiled silk), "fennel seed," and "eolocynth." By carrying a prescription of that kind around among a few score of pharmacists it is evident the possessor would soon collect a sufficient variety of drugs to start a store with.

## COCAINE NOTES.

SUPPLEMENTARY to what we have already published during the past three months concerning cocaine, we add the following:—

*Cocaine Fungus*.—Mr. H. Fenwick (*Lancet*, January 31) has noticed in a 4-per-cent. solution, after keeping some time, a peculiar mould-growth, which seems to possess the power of setting up inflammation of the mucous membrane to which it is applied. He had treated fifty cases of stricture successfully with this solution, but then three patients followed, who after treatment returned with urethritis. On examination of the solution the mould was observed. A new solution was made, and no further complications occurred.

Prof. Schnitzler, of Vienna (*Wiener Med. Presse*), after experience of 100 cases, says he has found that glycerine in the solution prevents the formation of fungus and promotes the absorption of the cocaine, while alcohol irritates the mucous membrane. He advises a solution as follows:—

	Parts
Cocain. mur. .. .. .	2 to 5
Glycerini .. .. .	20
Aq. destill. .. .. .	80

This is applied with a camel's-hair pencil two or three times. Anæsthetic action occurs in 5 to 10 minutes, and lasts usually from 20 to 30 minutes. He has found that the addition of 2 per cent. of morphia mur. to the above strengthens the action of the cocaine and makes it more permanent.

For insufflation for the nasal and throat passages he recommends a snuff composed 2 to 5 parts of cocaine mur., 20 of plumbi acet., and 80 of powdered sugar; or 2 to 5 of cocaine mur., and 50 each of bismuth subnit. and sugar.



Dr. Squibb devotes the greater part of the last issue of the *Ephemeris* to cocaine, relating experiments to discover a good working process, and giving much other useful matter. He points out that the usual method of application is wasteful. In every case care should be taken to cleanse the surface from all viscid secretions, and make it as dry as possible. The camel's-hair pencil should be as small as possible, and even then is a bad instrument to use. The best method is to cut a piece of fine worn linen to the exact size, saturate it with the solution, and apply it to the required spot, previously cleaned and dried. If it is desired to renew its efficiency, the upper edge of the fabric may be touched with a small camel's-hair brush dipped in the solution.

### EXAMINATIONS IN NEW SOUTH WALES.

It is with pleasure we have received and perused the series of questions set for the last examination of the Pharmacy Board of New South Wales. Apparently the examinations have been held on two different occasions, for there are two distinct sets of questions in each department, and the dates October 23 and 30 of last year respectively inserted. This enables us to make a very fair estimate of what the examinations really are, and, in the belief that whatever concerns our brethren in Australia will also be interesting to pharmacists in the old country, as also in view of the information frequently asked as to the state of pharmacy in the colonies, we intend making a few remarks on the style and scope of these examinations as shown in the papers before us. Readers of the letters of the Australian correspondent of *THE CHEMIST AND DRUGGIST* will be sufficiently conversant with the constitution of the Pharmacy Board, as well as of the position of the Pharmaceutical Society, to render any historical review of either unnecessary. Various changes, however, it may be pointed out, have taken place during the past year both in the examining board and in the style of examinations, the former owing very much to the exigencies of a profession requiring constant personal attention preventing some of the more competent and desirable continuing their services, the latter in the endeavour to bring the standard of the qualifying examination into harmony, not only with that of Great Britain, but also of the neighbouring Australian colonies. The examination is divided into three sections, namely, materia medica and botany, pharmacy, chemistry, and is altogether a written examination with the exception of the recognition of specimens in the first and last sections. In the materia medica and botany papers we find a series of questions (there are nine in all in each paper) as to the name, order, class, character, active principles, official preparations, formulae, doses, &c., of such drugs as *aconitum napellus*, *crocus sativus*, *colchicum autumnale*, *opium*, *glycyrrhiza glabra*, *quercus infectoria*, and *q. pedunculata*, *atropa belladonna*, *podophylli peltatum*; the naming of the principal plants and drugs derived from the orders *ranunculaceæ*, *rutaceæ*, *simarubaceæ*, and *cucurbitaceæ*; also from the orders *polygonaceæ* and *ranunculaceæ*; the naming of the principal animal substances of the British Pharmacopœia, or the naming (common and scientific), natural order and class of animals yielding official substances, as lard, suet, castor, pepsin, spermaceti. A list of the preparations of senega, gentian, matico, mezereon, and rhubarb. Ergot—what is it? Name its two bases and official preparations; with several other questions of a similar character. The examiner in this department is Mr. Larmer, and no one, we think, will venture to assert other than that the questions are judiciously set, fair to the candidates, and, for a written examination, probably as comprehensive as it is possible to make them.

In regard to the pharmacy papers we confess to being both perplexed and disappointed; perplexed because we fail to catch the spirit and bearing of some of the questions, and disappointed in that the progress of pharmacy during the past half-century has not provoked something higher than the general run of questions here given. In one paper, for example, we find such questions as the following:—(1.) Name the only aromatic water in the pharmaceutical preparations in which distillation is dispensed with. (2.) Give the percentage of the essential oil in aromatic spirits given (?), then their name, also the essences, both by measure. (3.) Why is emplastrum cantharides made nearly destitute of adhesiveness? (4.) What vegetable infusions are prescribed with salts of iron. (5.) Is the activity of medicines greater when administered hypodermically than by the mouth or the reverse? How much? (6.) Into what preparations does orange wine enter?

In the other paper we find the following:—(1.) What are the usual doses of aromatic waters? Give a notable exception? (2.) If an ounce of chloroform be ordered in a prescription, should it be dispensed by weight or measure? Is chloroform incombustible? Give specific gravity of pure chloroform; boiling point ditto. (3.) What precautions are necessary in making astringent decoctions? (4.) What increases the solubility of camphor in water? (5.) Are mineral tonics prescribed to be taken before or after meals? (6.) What preparations does *ol. ricini* enter into? (7.) What preparations does Hoffman's anodyne spirit enter into? (8.) What preparations does vinegar enter into? (8.) What is that which prevents the chloroform from evaporating in linimentum chloroformi?

In addition to the foregoing there are four prescriptions to be translated into English and eight or nine which the candidates are requested to state how to be dispensed. These are all of the usual stereotyped character, and call for no comment further than that we do not see the necessity for prescribing an extraordinary dose of a well-known poison and then calling the candidate's special attention to it by a "Show the prescriber's error here," or "Detect unusual dose (if any)." In ordinary practice no such special danger signal is shown, and a preliminary note that the candidate would be expected to detect error or unusual doses in any of the following prescriptions would be much better.

The chemistry examination is conducted by Mr. Mayne, and this probably will be sufficient guarantee to most that the examination is efficiently and fairly conducted. The questions comprise the preparation, character, and tests of such substances as carbonic acid, benzoic acid, sulphurous acid, amylic alcohol, disulphate of quinine, or chloroform, liquor chlori, bromides of potassium and ammonium, diluted phosphoric acid, &c.: the equation of several of the foregoing; the nature of fermentation and putrefaction and definition of deodoriser, antiseptic, and disinfectant; definition of a fat, and explanation of saponification; also questions on saccharification, oxidation, and in physics, &c.

It would be wrong to say that this examination even approaches in stringency and thoroughness the qualifying examination of the Pharmaceutical Society of Great Britain, but, as we have already explained, the Pharmacy Board of New South Wales have always shown a laudable desire to bring their examinations into harmony with that of other boards.

We have proof of this in the increased stringency of the examinations during the past year, and we have further proof still in the fact that on and after January of the present year practical chemistry, botany, and toxicology are to be added to the foregoing examinations. This is undoubtedly a step in the right direction, and might well be carried a little



further still. We have seen many a candidate, for example, who could glibly run over the natural order, class, and characters of almost every officinal plant in the Pharmacopœia, and yet fail in recognising the most common if presented to him in the fresh state. In like manner the majority would probably describe correctly the way to dispense the majority of the prescriptions in the pharmacy department, and yet if set to make such a simple mixture, say, as Griffith's, would bungle shamefully. A very little practical work quickly discloses weaknesses of this kind, and we have no doubt that an examining board such as that of New South Wales, which has shown such a genuine interest in the advancement of pharmacy, and which has hitherto been conducted with energy and enterprise, will not be slow to recognise this fact, and adapt their examinations accordingly.

The Cremation Society favour us with particulars of the friendly services which they are now prepared to offer. In consequence of the recent decision of Mr. Justice Stephen, who declares that the cremation of a dead body is a legal proceeding if effected without nuisance to others, they have decided to open their crematorium at Woking, for public use. They will require a written application from the friends or executors of the deceased, and two medical certificates of the cause of death before permitting the use of their institution. Their fees, which are exclusive of cost of transit, amount to 6*l*. The office of the society is at 11 Argyll Street, W.

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An American wholesale drug-house has issued a circular, from which it appears that a certain firm have been selling Powers & Weightman's quinine at a profit of 1*c*. per oz., and morphia salts of the same brand at a profit of 5*c*. per oz. The complaining druggists want to induce their contemporaries to unite to bring pressure to bear on Messrs. Powers & Weightman to institute what they call a rebate plan, which means that they are to fix a certain minimum rate of profit, at which wholesale firms are to supply their products. These attempts to enforce arbitrary rates are curiously opposed to modern ideas of commerce, and must result in diminishing the general recognition of the utility of the middleman in those branches of trade where they are attempted.

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In a "London letter" published in a recent number of the (New York) *Pharmaceutical Record*, Mr. Joseph Ince gives historical sketches of the School of Pharmacy Students' Association, and of the Chemists' Assistants' Association.

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Colonial Governments are less hampered by red tape and traditions than are the older concerns here. This is illustrated by a little item of news from Wellington (N.Z.), to the effect that the Government there have issued a circular intimating that members of the Civil Service cannot be permitted to take an active part in relation to the management of trading companies in which they may be shareholders. One would have supposed that such a regulation would be the most natural thing in the world for any Government to make, but our rulers have not yet succeeded in grasping its obvious justice and common sense.

\* \*

To those who see Great Britain's commercial sun setting it may be some little consolation to read the following figures, which Mr. Giffen has lately compiled, based on the export and import trade of the chief countries of the world. Calculated thus it appears the commerce of Great Britain, amounting to about 750,000,000*l*. sterling, is at the rate of 20*l*. per head; the foreign commerce of France, 429,000,000*l*. sterling, is 12*l*. per head; the United States, 306,000,000*l*. sterling, is 6*l*. per head; Germany, 488,000,000*l*. sterling, 11*l*. per head; Russia, 160,000,000*l*. sterling, 1*l*. 10*s*. per head; Austria, 143,000,000*l*. sterling, 3*l*. 10*s*. per head; and Italy, 100,000,000*l*. sterling, 3*l*. 10*s*. per head.

The number of patents applied for during the year 1884 under the Act which came into force on January 1 of that year, was 17,110. The largest number reached in any previous year was 6,241 in 1882. In 1883 the number slightly fell off, though the number of 5,993 was reached. The number of patents applied for in the United States in 1884 was 33,073.

\* \*

French law aims to provide even justice between physicians and pharmacists. This was illustrated by a case which came before one of the Paris tribunals last month. The Pharmaceutical Society of Paris prosecuted a certain Dr. Laman, of 146 rue du Bac, on a charge of illegal practising as a pharmaceutical chemist, and selling a secret remedy. He was the proprietor of an "Anti-catarth Liquor," which was shown to consist of alcohol, bitter orange peel, and thapsia. Another preparation, called "Bain Ant-rhumatismal," was also announced on the prospectus issued by the doctor, and sufferers from coughs, colds, and numerous other ailments were invited to fly to the doctor's "Mixture for immediate cure. The doctor was sentenced to a fine of 500*f*., to 200*f*. damages in favour of the Society, and to costs of insertion of the judgment in five newspapers.

\* \*

In the course of last year the proprietors of *The Ironmonger* (who are also proprietors of this journal) had to defend an action brought against them in respect of certain articles which had been published in that newspaper exposing a trade which was being carried on in an imitation brand of Swedish iron. After many legal delays the suit was referred to arbitration, and was ultimately decided on all points in favour of *The Ironmonger*. But the plaintiff was insolvent and the defendants could not recover any of their costs, which were very heavy. Last week, however, the proprietors had the gratification of receiving, quite unexpectedly, a deputation comprising a number of the chief importers of Swedish iron and representing the whole trade, who came to express the appreciation of the service rendered, and to present in recognition thereof a costly and very handsome service plate, suitably inscribed.

\* \*

The Council of the Chicago College of Pharmacy have manifested their grateful feeling towards English pharmacists in a novel and pleasant manner. It will be remembered that after the fire of 1871, in which their old college, with a large portion of their city, was destroyed, a considerable subscription was raised among pharmacists in this country and presented to the College as a mark of sympathy. The suggestion, and all the work of obtaining the subscription here, is to be credited to Professor Attfield. Remembering the service thus rendered, the Council of the Chicago College, who have now a handsome new building, have passed a special resolution to name the large lecture-hall in the College "Attfield Hall." From an article in the last number of the *Pharmacist* we learn that there are now 218 students in regular attendance at Attfield Hall.

\* \*

In the course of the lectures on "The New Chemistry" which Professor Dewar is giving at the Royal Institution, he has laid before his audience a product which till now, it says, has never before been seen in this country. It is sugar of the exact quality of "cane" sugar, but obtained from starch. From ordinary starch glucose is derived by treatment with sulphuric acid; the glucose, when subjected to the voltaic circuit, yields the sugar. The process is an American one, and, I am told, the discoverers state they can make sugar by this method at a less cost than it can be obtained from the cane.

FATAL DISPENSING ACCIDENT.—A fatal dispensing error was made last month by William Melchert, druggist, New Orleans. He admitted that he had made a mistake in filling the prescription, and instead of placing to 1 oz. of water 24 drops of aconite, as ordered, he had put in 1 oz. of aconite—equal to 480 grains. The medicine was administered, and the patient expired shortly afterwards.



## Scientific Notes :

*On Chemistry, Pharmacy, Botany, Materia Medica, &c.  
Original, Selected, and Translated.*

### DETECTION OF PHENOL IN CREASOTE.

WHEN a few drops of sweet spirit of nitre are mixed with a dilute solution of carbolic acid, and an equal volume of strong sulphuric acid added, a pink-coloured ring is formed, and, on mixing, a red-coloured solution is obtained (Eykman). In a paper communicated to the Edinburgh Chemists' Assistants' Association Mr. P. MacEwan proposes to take advantage of this reaction for the detection of phenol in creasote. Creasote gives a brown ring and brown solution, but if it contain phenol the sulphuric acid acquires a pink tint (transient, if a small percentage only is present), and, when the layers are mixed, a reddish-brown froth is produced. If the mixed solution from pure creasote be allowed to stand until the flocculence rises to the surface, the clear solution is found to be of a pale-brown colour; but if the creasote contain phenol the solution is dark-red or reddish-brown.

### OLEUM RUSCI.

OLEUM RUSCI, or white-birch tar, exists in the market in three or more varieties, no two of which are alike (see THE CHEMIST AND DRUGGIST, November, 1883, p. 541). In an additional note Mr. MacEwan states that the Russian oil is distinguished from the Dutch and German varieties by its low percentage of insoluble matter and volatile bodies, and its high percentage of saponifiable and non-saponifiable fatty bodies—81 per cent., whereas the German and Dutch contain only 36 and 47 per cent. respectively. In Russia the oil is used for currying, as well as for medicinal purposes, but the German and Dutch oils are unfit for currying, and, presumably, for medicinal purposes also, because the remarkable results obtained by dermatologists have been obtained with the currying oil. If a few drops of the Russian oil be shaken up with 1 oz. of water and filtered through a wet filter, the clear filtrate will give a pink colour with potassium cyanide solution, which is intensified by addition of ammonia. The German and Dutch oils do not give this reaction.

### THE PREPARATION OF COCAINE.

DR. A. CASTAING, in the *N. Y. Med. Jour.*, December 27, 1884, describes a process, which repeated trials have shown to be most effectual, to extract the alkaloid from the *Erythroxylon coca*. Having observed that cocaine is extremely susceptible of change under the influence of acids, he studied how to exhaust the coca leaves without using acidulated liquids, and discovered the following method, by which 1 grain of cocaine can be extracted from 480 grains of leaves. To obtain this result, however, it is requisite that the coca leaves be of good quality—that is, gathered at the right time and place, properly dried (a leaf with brown spots on it, resulting from moisture, has lost all value), and, above all, not injured by age or by exposure to the air and consequent evaporation.

*Modus Operandi.*—On 1 part (by weight) of coca leaves pour 8 parts of boiling water, and let them steep for half an hour in a closed vessel in a water-bath. Pour the whole into a percolator, and, when all the liquid part is strained off, continue the exhaustion of the leaves by pouring on them 8 parts of alcohol at 85°. Mix the two liquors and precipitate them by means of acetate of lead, draw off with a syphon, and then add sulphate of sodium to remove the salts of lead. Filter, and evaporate at a gentle heat until the liquid has attained the consistence of syrup. Treat the whole with water to separate the resinous part, and then precipitate with carbonate of sodium. The precipitate is then to be exhausted by sulphuric ether, and the ethereal solution, after the ether is distilled, is exposed to the air until every trace of ether has completely disappeared. By this means is obtained a crystallised residue of a brownish-yellow, and of a disagreeable smell. This is impure cocaine.

The colouring-matter is removed by washing once or twice with cold alcohol. The cocaine, thus purified, appears in the form of transparent prisms, without smell, bitter to the taste, soluble in 700 parts of cold water, more soluble in alcohol,

and entirely soluble in ether. The solution has an alkaline reaction, and, when applied to the tongue, imparts a bitter taste, and a certain insensibility, followed by a slight sensation of cold, recalling the effect of ether spray upon the epidermis.

Heated to 208° F. the cocaine becomes liquid, and, under the influence of cold, it becomes a transparent mass, which gradually assumes a crystalline form. If it be exposed to a degree or heat higher than 208° F. cocaine changes its colour and decomposes. It forms soluble salts with acids (its hydrochlorate is the best), and all these salts are more bitter than the alkaloid.

### TESTING COD-LIVER OIL.

AN apotheker in a small Austrian town, with but two pharmaceutical businesses, having charged a colleague with having sold cod-liver oil of a quality inferior to that required by the Austrian Pharmacopœia, Dr. Hager was appointed arbiter, and received samples of the oils sold respectively by the two apothecaries. The oil sold by the impeacher was of the golden-yellow colour prescribed by the Austrian Pharmacopœia, while that of the inculpated apotheker was of a pale yellow colour.

Dr. Hager soon ascertained that the discredited oil was the best, being a steam cod-liver oil of prime quality, while the oil, which was of the proper Pharmacopœia colour, was a secondary kind.

Dr. Hager remarks, in the *Pharm. Centralhalle*, January 8, 1885:—

“Contrary to the former method, when the presence of free fatty acids in cod-liver oil was considered an essential feature of good quality, cod-liver oil at the present day is required to be as free as possible from free fatty acids, in consequence of which Jacobsen's test, which consists in ascertaining the percentage of rosaniline dissolved by cod-liver oil, which percentage is in direct proportion to the amount of free fatty acids present in the oil, if employed at all, can only be employed in exactly the opposite sense to his intention, so that any sample of cod-liver oil which should exert a solvent action on rosaniline would have to be discarded as worthless.”

Since cod-liver oil containing soap also exerts a solvent action on rosaniline, this test would also serve for ascertaining a fraudulent neutralisation in this way.

### TESTS FOR COD-LIVER OIL.

1. From 2 to 3 drops of oil are placed in a test-tube, and shaken up with 4 to 5 drops of tincture of litmus. In the case of best steam cod-liver oil, the blue colour of the litmus tincture remains at least an hour unaltered, while steam oil of second quality or yellow oil of first quality produces a red coloration within ten minutes, and oils of lower quality change the colour at once.

2. From 8 to 10 drops of oil are mixed in a test-tube with 2 c.c. of chloroform, and 2 drops of concentrated sulphuric acid are added. On agitating the mixture should at first become bluish violet, darken within a few minutes, passing into permanganate violet, brownish red, dark brown, and, finally, brownish black. The German Pharmacopœia employs carbon bisulphide in the place of chloroform.

3. 4 c.c. of oil are shaken up in a wide test-tube, with 2 c.c. of concentrated sulphuric acid. The mixture soon turns dark, and after standing for three or four hours forms a tolerably stiff unctuous mass of the consistency of wax. When, however, foreign fish oils are present, the oil tested assumes the consistency of vaseline.

4. The elaidin test with nitric acid of a specific gravity of 1.185 and a few copper clippings is constant for all true samples of cod-liver oil. No coloration takes place during the nitric acid test, and nothing is separated out or deposited even on allowing the mixture to stand for two or three days. The elaidin stratum should be yellow, with a tinge of brownish red, clear, or but slightly turbid, and less viscid than cod-liver oil. Any separation of substances indicates the presence of foreign fats.

5. *Saponification.*—7.5 g. of oil, 15 c.c. of a solution of caustic soda of sp. gr. 1.160, and 5 c.c. of water are placed in a glass flask capable of containing three times the above volume, shaken up, and then brought to ebullition four or



five times under constant agitation. The whole is then poured into a capacious test-tube, and this placed for a few hours in a warm place and then in a cold one. When the saponified mass is cold, it should form two layers, the upper one but slight and of moderately firm consistence and transparent, while the lower one, which ought to be the deeper, should be perfectly liquid. Foreign fats or resins cause the whole to assume a hard or opaque consistence.

6. *Detection of Vaseline.*—A ready method of at once determining the presence of vaseline is wanting. The specific gravity is the best guide. The sp. gr. of cod-liver oil varies between 0.920 and 0.930; if lighter than 0.920, the presence of vaseline oil may be suspected, and the sample must be examined for mineral oils.

7. *Detection of Colophony.*—Any adulteration with colophony would increase the specific gravity. By the saponification no clear soap would be obtained (No. 5). The sulphuric-acid test would also give other results than in No. 5. To make sure, the oil is boiled with a mixture consisting of equal volumes of dilute alcohol, and 90 per cent. alcohol, and the whole well shaken. Any resins present are thus extracted, and may be found in the filtered and evaporated alcoholic solution.

8. *Lead.*—Any fraudulent neutralisation of cod-liver oil with lead would contaminate the oil with the salts of that metal, for the detection of which a sample of the oil should be boiled with acetic acid, and the lead determined in the latter by any of the usual methods.

The chief object in examining cod-liver oil is to ascertain whether it is contaminated with free fatty acids, and for this the taste serves as the first guide, since pure cod-liver oil has an extremely mild taste, which becomes more and more acid in proportion to the percentage of free fatty acids it may contain. Any irritation on swallowing would therefore indicate the presence of free acids.

#### THE CAUSES OF SOME BOILER EXPLOSIONS IN 1883.

THE *Chemiker Zeitung*, January 18 and 21, 1885, enumerates a series of 14 boiler explosions, which occurred in Germany during 1883. Of these 5 were due to insufficiency of water, 4 to local wear of the boiler-plates, 2 to too high tension of steam, and 1 each was due to weakness of boiler-plates accompanied by negligence of the attendant, imperfect construction, and over work of the boiler. (See THE CHEMIST AND DRUGGIST, 1884, p. 124.)

#### ON THE RUBESCENCE OF CARBOLIC ACID.\*

VARIOUS theories have been set up to account for carbolie acid turning red when kept; metallic salts, or the presence of derivative substances, have been suggested as the causes. To this latter view Dr. Hager is still inclined, and the results of recent careful experiments lead him to believe that the rubescence is due to the presence of substances of the coralline and tropæoline group.

#### LAKMOID, A SUBSTITUTE FOR LITMUS.†

By heating resorcin with a small quantity of sodium nitrite and water to a temperature not exceeding 150° C., M. C. Traub and C. Hoek have obtained a deep blue substance soluble in water, and which showed such a remarkable resemblance to litmus in all the reactions tried with it, that the authors have given it the temporary name of "lakmoid" (from "lakmus," the German word for litmus).

Lakmoid is best prepared by gradually heating together in a glass flask, over an oil-bath, 10 parts of resorcin, 1 part sodium nitrite, and 1 part water up to 120° C., which temperature is maintained until ammonia ceases to be evolved, and the contents of the flask have become blue. The fused mass is then dissolved in 10 parts of distilled water, and treated with an excess of hydrochloric or acetic acid. The precipitate which ensues is collected on a filter, washed with distilled water, and when dry dissolved in 100 parts of absolute ethyl or amyl alcohol. This solution is filtered, and the filtrate dried in an atmosphere free from ammonia, for which purpose a desiccator containing sulphuric acid is the most suitable.

Thus prepared, lakmoid exhibits lustrous, reddish-brown laminae, readily soluble in alcohol, glacial acetic acid, and phenol, but sparingly soluble in ether and pure water. The best solvent for lakmoid, as an indicator, consists of a mixture of equal parts of water and alcohol of 96 per cent. 5 parts of lakmoid and 100 parts of the solvent being the most suitable proportion. The solution, which is of a fine red colour, immediately turns blue on the addition of a trace of any alkali.

In its behaviour towards reducing agents, and when examined by the spectroscope, lakmoid likewise shows a great resemblance to litmus, and the authors are inclined to believe that it is identical with that substance. They are engaged in further researches on the subject.

#### THE PHARMACOPŒIA COMMISSION OF THE GERMAN APOTHEKER VEREIN ON SOME IMPROVED TESTS FOR CERTAIN PHARMACOPŒIA PREPARATIONS.\*

##### I.

It having been found that a good many discrepancies have crept into the new German Pharmacopœia, especially as regards the most efficient way of testing the purity of some of the preparations, the above-mentioned commission has resolved to publish from time to time, in the *Archiv der Pharmacie*, such modifications as they may deem necessary.

##### 1. *Acidum Citricum.*

*Lead.*—A 10-per-cent. solution of the acid, nearly neutralised with ammonia, and mixed with double its volume of sulphuretted-hydrogen water, should show no coloration.

*Tartaric Acid.*—On mixing an alcoholic solution of the acid (1 : 3) with an equal volume of the official potassium acetate solution (1 : 3) no white precipitate should be formed.

##### 2. *Acidum Formicum.*

*Acetic and other Acids.*—10 g. of the acid should saturate 52.20 to 54.35 cc. of a normal solution of caustic potash, which represents 24 to 25 per cent. of formic acid. Further, 1 g. of the acid, diluted with 5 g. of water and heated over a water-bath, with 1.5 g. of yellow oxide of mercury, under constant stirring until the evolution of gas ceases, should yield a neutral filtrate.

##### 3. *Balsamum Peruvianum.*

*Oil of Turpentine, Styrax, and Copaiba Balsam.*—When 1 g. of the balsam is well shaken up with 5 g. of petroleum benzine, and, after standing for a while, 30 drops of the clear solution evaporated in a porcelain dish to remove the benzine and the residue gently heated, no smell of oil of turpentine, or of styrax, or of copaiba balsam should be recognisable, nor should this residue when cold, on being very gently heated with 5 drops of nitric acid of a specific gravity of 1.30, turn blue, bluish-green, or violet throughout the mass.

##### 4. *Bismuthum Subnitricum.*

*Arsenic.*—When 1 g. of the preparation is heated to redness, and the residue dissolved in 10 c.c. of hydrochloric acid in a capacious glass flask, and, after dilution with double its volume of water, a sufficient quantity of zinc is added, the gas evolved should not, within a quarter of an hour, produce any coloration on a piece of bibulous paper saturated with a solution of silver nitrate of a concentration of 1 : 2.

#### MERCURIAL PREPARATIONS.

DR. AD. SOMMER has contributed a paper on the manufacture of certain mercurial preparations on a large scale to the Manchester section of the Society of Chemical Industry, from whose journal we take the following abstract:—

*Unguentum Hydrargyri.*—The author draws attention to the fact that mercury is capable of more rapid extinction, or being brought to a finer state of subdivision, by prolonged agitation with such liquids as turpentine, olive oil, or resinous tinctures (e.g. tr. tolu and tr. benzoin) than by the pre-

\* *Pharmaceutische Centralhalle*, January 1, 1885.

† *Berichte der deut. chem. Gesellsch.*, vol. 17, page 2,615.

• *Archiv der Pharmacie*, January, 1885.



sent mode of trituration with fat. He advocates the following formula and method of manipulation:—

	lbs.
Mercury .. .. .	50
Olive oil .. .. .	4
Resin .. .. .	4
Fresh beef-tallow .. .. .	42½

Upon a solid board, which accurately fits into the frame of a sifting-machine having a horizontal motion, are fastened by means of wires and wooden cross-pieces two ordinary iron mercury-flasks. Into each flask are poured 25 lbs. of mercury and 2 lbs. of olive oil. The plugs are then tightly screwed into the openings of the flasks, and the whole apparatus is laid in the aforesaid frame. The latter, which is attached to an eccentric-crank, is then set in motion by connecting the latter by means of a belt and pulleys with the shafting of a steam-motor, and allowed to be shaken for about eight hours. At the end of this time the mercury is in so fine a state of division that a magnifying-glass with a power of ten diameters will show no globules of mercury. In the meantime, the beef suet is melted, and, after liquefaction, allowed to cool to about 50° C. The contents of the two flasks are then emptied into a capacious pan, and about one-fifth of the mixture of liquefied fat and resin added. This mixture is then vigorously stirred till it has become semi-solid, when another portion of the liquid fat, which, of course, by very little warmth, must be kept as near as possible to 50° C., is added to it. These additions and subsequent incorporations of liquid fat are continued until all of it has been added, observing the precaution never to make any new additions before the previous one with the mercurial mixture has cooled down to a semi-solid state. To ensure complete homogeneity the ointment, while still warm, is passed through an ordinary iron paint-mill.

*Pilula Hydrargyri.*—For this compound the author adopts a similar method for the extinction of the mercury, and gives the following formula:—

	Mixture for one mercury flask
Mercury .. .. .	25 lbs.
Glycerine .. .. .	2 lbs. 5½ oz.
Water .. .. .	9½ fl. oz.
Alcohol .. .. .	9½ fl. oz.
Powdered licorice root .. .. .	3 oz.

These ingredients are all placed in an iron mercury-flask, which is shaken precisely in the same manner and by the machine described above under mercurial ointment. After eight hours of shaking the mercury is found to be finely divided. The contents of the flask are then poured into a large dish, and honey, with energetic agitation, added. When the mixture has become perfectly homogeneous, proper proportions of powdered rose-leaves, marshmallow, and licorice-root, that are requisite for 75 lbs. of blue-pill mass, are incorporated. The mass is further kneaded by means of a long wooden lever firmly attached to a wooden bench or table.

*Hydrargyrum cum Cretâ.*—Under this head the author describes in detail a well-known process, which consists of introducing the necessary ingredients, together with iron balls, into a large barrel, and rotating the latter on its axis by the aid of a steam-motor for ten hours, at the end of which time the mercury was found to be thoroughly incorporated.

Mr. Elborne said that, while no doubt the theory of the process for the extinction of the mercury introduced by the author was very good, he did not consider that British wholesale manufacturers of British Pharmacopœia mercurial ointment would be justified in adopting the author's formula, since the latter contained such extraneous substances as resin and olive oil; but for a "commercial" mercurial ointment, that is, one supposed to be of the same strength, but not prepared exactly according to the British Pharmacopœia process, the author's is probably a very good working formula. Mr. Elborne believed that all the unguentum hydrargyri, as at present prepared by the wholesale houses in this country, was made by trituration with heavy machinery; if, therefore, the author's process of extinction by agitation could be adapted to the British Pharmacopœia formula with any great saving of time and labour, he saw no reason why it should

not be adopted. The mode of operating with the British Pharmacopœia formula would then evidently consist in agitating the mercury with the lard, kept in the molten state by the application of heat; whether it would thus yield a satisfactory result he was not prepared to say. As regards the author's process for the extinction of mercury in the preparation of blue pill, it was certainly a novel one; the present mode of extinction adopted in the trade, he believed, being effected by means of a sort of drug-mill, in which the mercury was ground with honey. In reference to the mode of preparation suggested for the preparation of hydrargyrum cum cretâ, he believed it was a process already long adopted in this country, and one in which there was probably room for improvement.

## Medical Gleanings.

THE TREATMENT OF BRONCHITIS.—Dr. H. C. Wood, of Philadelphia, who has recently undertaken the duty of associate editor of the *Therapeutic Gazette*, contributes a brief article on the treatment of bronchitis which is very practical. He more especially considers bronchitis in such forms as simple colds.

It is sometimes important, he remarks, to break up such attacks at once. Under these circumstances a plan adopted by a well-known public speaker, who found himself in the morning before an important engagement completely stopped up, may sometimes be adopted with advantage. This gentleman simply drank tartar emetic wine until he had vomited and sweated freely; then toning himself up with ale and oysters, performed his task with ease. The disagreeableness of this plan prevents its general adoption, and, of course, it can only be applied to robust subjects.

Every physician knows that the sedative expectorants are used in the first or dry state of a cold. Between ipecac and antimonials there is little choice, except that the latter remedy is distinctly dangerous to very young children and very feeble or old adults.

It is, however, not so generally known that large doses of alkalies are amongst the most efficient of sedative expectorants. The citrate of potassium is much the most eligible form for administering alkaline expectorants; of it ½ oz. to 1 oz. should be given in the twenty-four hours.

The following prescription has been tested during the last four or five years, and found to be much the most reliable and efficient sedative cough mixture that I have ever used:—

Potass. citrat.	..	..	..	..	3j
Suc. limonis.	..	..	..	..	f 3j.
Syr. ipecac.	..	..	..	..	f 3ss.
Syrupi	..	..	..	..	q.s. ad f 5vj.

M. S. Tablespoonful four to six times a day.

When there is a good deal of cough, or any excessive susceptibility of the bowels to loosening medicine, paregoric should be added in small quantity. The ipecac must be varied according to the susceptibility of the patient's stomach. Sometimes it can be advantageously substituted by tartar emetic. Usually two or three days of such medication will establish free expectoration. Then the stimulant expectorants are required. Among these may be named squills and senega. I cannot, however, affirm that I have often obtained positive results from their use, and think much of their reputation is based upon tradition and upon the fact that in time even bronchitis subsides. Of the two, squills is the more valuable. Even it, however, is inferior to the muriate of ammonia. Like all ammoniacal preparations, this must be given at short intervals in order to maintain any constancy of effects. The action of the single dose can scarcely last more than two hours. Its acridity and disagreeableness may be somewhat covered by putting glycerine into the mixture. It must also be remembered that, given in very large amounts, all ammonia salts are capable of acting on the crasis of the blood as alkalies and of causing great vital depression.

The value of copaiba in chronic bronchitis has been long recognised, and it may sometimes be used with advantage in obstinate subacute bronchitis. When the "cold" in children is obstinate, "syrup of gerlic" is very efficacious. But the



stimulant expectorant which in my hands has almost replaced others of the class is the oil of eucalyptus. It may be administered in ordinary cases of adults to the amount of about 40 minims a day. Its taste is so pre-eminently disagreeable that it should be given in capsules, each of which may contain 10 minims; or, if the patient prefer, two capsules of 5 minims each may be taken at a dose. The oil appears to be slowly absorbed and eliminated, so that four times a day is often enough to administer it. Given in emulsion it is very apt to be the source of unpleasant eructations, but when taken in capsules is usually well borne. There are, however, some stomachs which will not tolerate it at all.

The value of counter-irritations in bronchitis and severe colds is very great, but it only seems necessary here to call attention to an old, but almost forgotten remedy—the oil of amber—as being especially valuable in the treatment of bronchitis of young children, associated, as it so often is, with marked nervous disturbance and a tendency to collapse. The oil diluted with from 1 to 3 parts of sweet oil applied to the chest as a sort of stupe (upon saturated flannel) sometimes acts very happily in allaying nervousness as well as internal congestion.

A HOSPITAL DRINK-BILL FOR SIX MONTHS.—The manner in which the taxpayers' money is expended by a body whose province is to practise economy consistent with efficiency has been brought to light recently at a meeting of the Westminster Union, when a communication was read from the Islington representative of the Metropolitan Asylums Board calling attention to the necessity of unity of action among the Metropolitan Guardians, with a view to putting an end to the extravagant expenditure at the hospitals of the Board. The following figures show the expenditure for drink for the officers only, for the six months ending September last, at the Homerton Hospital, and may well cause astonishment among the friends of temperance:—

	£	s.	d.		£	s.	d.
Ale and bottled beer ..	763	3	5	Soda water ..	1	2	1
Port wine ..	107	3	10	Seltzer ..	0	13	9
Sherry ..	3	8	4	Apollinaris ..	4	3	0
Brandy ..	7	14	4	Tea, at 3s. per lb. ..	36	13	6
Whisky ..	3	0	8	Ditto, at 1s. 6d. per lb. ..	105	17	6
Gin ..	0	5	4	Coffee ..	62	2	10
Champagne ..	38	11	8	Cocoa ..	35	13	7
Claret ..	24	7	0	Milk, at 1s. per gallon ..	80	9	8
Burgundy ..	213	3	0	Ditto, at 2s. per gallon ..	33	18	6
Hook ..	0	17	4				
Rum ..	0	3	5				
Lemonade ..	190	0	7				
				Total	£1717	13	4

It will be noticed there are two qualities of tea—one at 3s. per lb., and the second at 1s. 6d. per lb.; and two qualities of milk—one at 1s. per gallon, and the second at 2s. per gallon. In the milk item at least the price ought not to vary; the tea at 3s. likewise seems a high price too. In both tea and milk it will be seen the difference is excessive, considering that the goods are supposed to be bought in the market. Poor taxpayers of the misgoverned metropolis! when will this mismanagement end?—*Midland Med. Miscellany.*

RECOVERY AFTER TAKING  $1\frac{1}{2}$  OZ. OF CHLORODYNE.—Dr. Thomas Cole reports in the *Brit. Med. Journ.* the case of an elderly farm labourer brought to the United Hospital at Bath after taking  $1\frac{1}{2}$  oz. 20 minims of Brown's Chlorodyne. An emetic was administered, and the patient quickly recovered.

THE "Medical Report of the London Temperance Hospital" for 1883-84 gives a list of fifty-three cases of typhoid fever which were treated with the result of six deaths. All the fatal cases were complicated. None of them were total abstainers. Of the abstainers who were under treatment all recovered, though some of them were severe cases. Alcohol was not administered in any case.

PARALDEHYDE.—The February number of the *Medical Chronicle* (Manchester) contains an original paper by Dr. Leech on "Paraldehyde." From it we learn that paraldehyde is likely to prove valuable as a soporific. Chloral, opium, and the bromides have their separate areas of usefulness, but there are cases in which a sleep-producing agent is required to which none of these ordinary remedies are applicable. Paraldehyde fills up one of these gaps, and may be given with advantage when there are objections to the use of the other drugs named.

SIR JAMES PAGET gave some good advice in an address last week at the close of the session of the Army Medical School at Netley. He warned his young hearers that their whole future life would be a prolonged competitive examination. Speaking for himself, he had never spent a day when he had not to feel that, according as he did what he had to do well or ill, so would be his progress or promotion in life, and he had this feeling in his mind still. Even now he found himself not infrequently in a sort of examination in which he felt he might some day be plucked. His examiners were not his seniors, but his juniors, who spoke sometimes in language it was not easy for him to understand; and he had to deal with a knowledge of medical science possessed by them which he had not been able to study. He often felt as if there was a knowledge he ought to possess, and which it might be deemed discreditable by younger men he did not possess, and he had often had to retire with that happy expression made use of by one of the old masters of Trinity College the other day, when he said that "even the youngest amongst us are not infallible." Duty Sir James Paget defined as "doing all that one possibly could for the good of others, and taking the chance whether it might be also good for oneself." One duty of the young surgeons whom he addressed was to contribute their share to the progress of medical and surgical knowledge. They had received and borrowed from the past, and it was their duty to pay for it in the future.

TOXIC EFFECTS OF GELSEMINUM.—Mr. Charles Wood, Dover, reports in the *Brit. Med. Journ.* a case of an overdose of gelseminum. A patient whom he had been attending for neuralgia had taken within an hour an 8-oz. mixture containing, besides quinine, 2 drachms of tincture of gelseminum. The first symptoms were giddiness, followed by double ptosis, extreme dimness of vision, difficulty in breathing, also in articulating. There had been a transient rigidity of the muscles of the neck, arms, and slightly of the lower extremities. Mr. Wood saw her about two hours after taking the mixture, and ordered strong coffee and ammonia mixture; and, in the course of three hours, the symptoms had entirely disappeared, but the neuralgia had returned more severely than ever.

LEAD PLASTER DANGEROUS.—In the *Homoeopathic Review*, Dr. Robert T. Cooper narrates two cases which seem to show that lead plaster used to dress wounds with caused inflammation and swelling. Changing the plaster for a dressing of ointment of fig-root (*Scoropularia nodosa*), with aconite administered internally, gave quick relief in both instances.

## BANKRUPTCIES AND LIQUIDATIONS.

FRED. C. ALLEN, Walsall.

FREDERICK CHARLES ALLEN, 36 Digbeth, Walsall, chemist and druggist, appeared for public examination on January 6. His statement of affairs showed liabilities to the amount of 747l. 10s. 9d. The assets amounted to 290l. 2s., out of which 25l. 18s. 4d. had to be paid for preferential payments, leaving a total deficiency of 483l. 7s. 1d. The bankrupt stated that he started in business nine months ago with 30l. of his own, and borrowed 375l. from his brother-in-law. The causes of the failure were said to be the heavy rent and the smallness of the receipts. The deficiency was accounted for by the difference between the cost and the present value of the fixtures, stock, and furniture. The meeting was adjourned until January 15, when the bankrupt was allowed to pass.

CHARLES GRIFFIN, Chemical and Philosophical Instrument Maker, late of Garrick Street.

THE public examination of this debtor was held in the London Bankruptcy Court on Friday, January 23, before Mr. Registrar Brougham. The debtor traded as above under the style of "John J. Griffin & Sons," and he had filed accounts showing partly-secured debts to the amount of 9,471l., the value of the security being estimated at 5,200l. The total expected to rank for dividend is 6,694l. 17s., and the assets are put down at 80l., this being the value of household furniture, less certain preferential claims. From the questions



put to the debtor by Mr. Tanner, on behalf of the Official Receiver, it appeared that the debtor was admitted into the business by his father in 1866, and his brother also became a partner in the same year. The father retired in June, 1874, and the brothers then executed a bill of sale in his favour to secure the capital which he left in the business, and which was ascertained to be 5,200*l.* In 1881 the security was renewed, and was also made to cover a further sum of 1,671*l.* 5*s.* 7*d.*, interest, &c., and certain annuities likewise payable under the agreement. The debtor's father died in 1877, and his brother in July, 1883, and the main liabilities consist of the indebtedness to the trustees under Mr. Griffin, senior's, will. The trade debts amounted to 1,800*l.* about. The failure is attributed to the seizure of the business and effects in August last by the trustees under the powers of their bill of sale, those gentlemen now carrying on the business through the medium of a receiver appointed by the Court of Chancery in the action Griffin v. Griffin. The debtor further says the business was unable to pay all the annuities and charges imposed upon it, the sum for which it was liable being 800*l.* a year. The books having been seized under the Chancery action he is unable to produce these in verification of his statement, but it is thus endeavoured to explain the deficiency of 6,613*l.* 19*s.* 6*d.* :—

	£	s.	d.
Deficiency on June 30, 1880 .. .. .	41	15	0
Loss on trading from July 1, 1886, to the June 30, 1883 .. .. .	570	12	1
Annuities, interest, &c., for same date .. .. .	2,413	15	8
Partner's drawings, same date .. .. .	2,518	7	0
Annuities, interest, &c., July 1, 1883, to August 9, 1884 .. .. .	1,237	1	7
Partner's drawings, same dates .. .. .	490	8	4
Deduct—			
Profit on trading from July 1, 1883, to August 9, 1884 .. .. .	522	8	9

There was thus a small deficiency practically unaccounted for. The value of the debtor's furniture was put in the statement at 100*l.*, but that was subject to preferential claims to the amount of 19*l.* 2*s.* 6*d.* The debtor is entitled to a legacy of 1,000*l.* under his father's will, but that, he says, will be swallowed up, together with the whole of the business and effects, by the claim of the trustees, and the assets not being expected, under the circumstances, to realise more than 300*l.*, the Court has made an order for summary administration. At the first meeting of creditors, on January 5, no resolution was carried, the official receiver being, therefore, trustee. In the course of further questions the debtor stated that if the holders of the bill of sale had not enforced their rights the business would have paid all debts, for it was looking up considerably, and there was a prospect of great improvement. He called his trade creditors together directly the trustees insisted on being paid, and it was then that he first became aware of his insolvency. There being no opposition the public examination was ordered to be concluded.

GEORGE HULL, Druggist and Drysalter, 77 Smallbrook Street.

A MEETING of the creditors of the above-named debtor was held on January 30, at the offices of the Official Receiver. Mr. L. J. Sharp (Official Receiver) presided. Mr. Walford appeared for the debtor, and Messrs. M. A. Fitter, W. N. Fisher, and H. Parish for the creditors. The statement of affairs was as follows:—Liabilities: Creditors unsecured, 1,934*l.* 11*s.* 6*d.*; amount of liabilities, 4,665*l.* 12*s.* 4*d.*; estimated value of securities, 3,335*l.* 12*s.* 6*d.*; leaving to rank for dividend 1,329*l.* 19*s.* 10*d.*; making the total 3,264*l.* 11*s.* 4*d.* Assets: Book debts, estimated at 319*l.* 11*s.* 1*d.*; stock-in-trade, 375*l.*; furniture, 235*l.* 9*s.* 6*d.*; fixtures and fittings, 100*l.*; total, 1,030*l.* 0*s.* 7*d.*, less debtors to be paid in full, 69*l.* 4*s.* 8*d.*; leaving a deficiency of 2,303*l.* 15*s.* 5*d.* The Official Receiver, in his report, said the debtor commenced business as a grocer in Islington Row, Birmingham, about forty years ago, with a very small capital. He was successful, and moved to more extensive premises in Smallbrook Street. Here his success continued, and ten years ago he was possessed of from 10,000*l.* to 12,000*l.*, after providing for his liabilities. At this time he became responsible for a relative, which resulted in a loss of 7,000*l.* To raise this he sold bank shares and raised a mortgage on property he was possessed of. The immediate cause of the failure was attributed to building the premises he now occupies. Mr.

Walford thought the assets were over-estimated. He was instructed to offer 5*s.* in the pound, payable 2*s.* in one month, 1*s.* 6*d.* in three months, and 1*s.* 6*d.* in six months, the last instalment to be guaranteed. After some conversation it was decided to adjourn the meeting for a valuation to be made of the assets. The adjourned meeting was held on February 10. The revaluation of the stock showed an increase of 215*l.* 3*s.* 6*d.* in the assets, said to be due to the estimate being made of the affair as a going concern. The debtor's offer was finally increased to 6*s.* in the pound, which was accepted.

GEORGE SMITH PALMER, 3 Grand Promenade, Brixton.

At the adjourned first meeting of the creditors of the above-named debtor, who filed his own petition on December 12, held in the London Bankruptcy Court on January 22, under the presidency of Mr. Stewart, one of the assistant official receivers, the accounts showed unsecured debts 1,116*l.* 3*s.* 4*d.*, and assets 125*l.* 16*s.* 6*d.* The first meeting had been adjourned with a view to a composition being offered. The debtor's solicitor said that, as the result of efforts that had been made, he was now instructed to offer a sum of 100*l.* for the purchase of the estate. The debtor would take upon himself the settlement of all preferential claims, so that the 100*l.* would be devoted solely to the payment of the costs, and to the payment of a composition among the unsecured creditors. They (the debtor's friends) were prepared to deposit 20*l.* forthwith, and to satisfy the Official Receiver within three days that all preferential claims had been arranged, and to hand over the balance of 100*l.* prior to the confirmation of the scheme. In reply to questions, it was stated that the landlord had a claim for rent of 160*l.*, which could not be satisfied by the furniture and stock. It was at first hoped that it would be possible to get 150*l.* clear for the estate, but the intending purchaser at that price had withdrawn, and it was with great difficulty they had been able to get the present offer from friends of the debtor, who had joined together to take over the estate. The lease had eighteen years to run, but was mortgaged, and those who were providing the 100*l.* were in fact making themselves responsible for 730*l.* It would be impossible to increase the offer. The chairman suggested that it would be preferable to offer a definite composition, and in the end the offer was altered, so as to provide for the payment of the costs, and of a dividend of 1*s.* 6*d.* in the 1*l.* This was accepted without opposition. Later in the day the public examination of the bankrupt was held before Mr. Registrar Hazlitt. The official solicitor intimated that the first meeting had been concluded, and he was not instructed to examine the debtor at all. There being no opposition, the public examination was ordered to be concluded.

The Affairs of HENRY BEDFORD SLEEMAN, of London and Birmingham.

THE adjourned public examination of the bankrupt was held on the 3rd inst. in the London Bankruptcy Court, before Mr. Registrar Pepys. The debtor, it will be remembered, carried on business as a general merchant at 37 Lime Street, E.C., and 56 Charlotte Street, Birmingham, and his accounts showed as follows:—Gross liabilities, 19,958*l.* 6*s.* 10*d.*, of which 17,611*l.* 10*s.* 8*d.* is expected to rank for dividend; as against assets estimated at 3,376*l.* 19*s.* 8*d.* Among the debtor's liabilities scheduled were some in respect of certain publications in which he was interested with a Mr. J. F. Cantwell. The publications in question were "The Mercantile World" and "Sleeman's Drug and Chemical List." The latter ceased in April, 1884, and in its stead was issued "The British and Colonial Druggist" and "The A B C Guide." Cantwell & Co. had rendered a statement showing the bankrupt to be indebted to them in the amount of 85*l.* 11*s.* 4*d.*, but Mr. Sleeman does not anticipate that any claim will be made against the estate in respect of it, nor does he place any value on his interest in the said publications. At the first meeting of creditors a resolution was passed in favour of adjudicating the debtor a bankrupt. Mr. Goddard now appeared for the trustee then appointed, and Mr. Aldridge for the Official Receiver. In reply to the latter, the bankrupt said he had not had his books balanced since June, 1883, because he did not wish to incur the expense. At that time business was in a very depressed state, and the result of the



balancing of the books was to disclose a deficiency of 6,000%. He, however, continued to trade in the hope of business reviving, so that he might recoup himself. He had incurred no large liabilities since then, and the difference between his then deficit and that shown on his present statement of affairs was accounted for by the fact that he now treated certain debts as bad, which previously he had looked upon as good. He failed in India in 1866, but got his discharge under those proceedings. His Honour ordered the public examination to be concluded.

WILLIAM HENRY TAYLOR, 38 Walbrook, City, and 186 Tulse Hill, Chemist and Druggist, &c.

THE first meeting of the creditors of this debtor was held in the London Bankruptcy Court on Monday, January 26, under the presidency of Mr. Wildy, one of the assistant official receivers. The debtor filed his own petition on December 19, and the public examination was fixed for January 27. From the preliminary examination it transpired that the debtor, who also acted as a chemists' valuer, has been a year and nine months at Tulse Hill, and three or four years at Walbrook, having until February or March last been in partnership with Mr. R. Tench, at 30 Walbrook, and 24 Holywell Street. There were no debts due under the partnership. The debtor commenced business about ten years ago, and in January, 1881, had a capital of 700%. He states that he has been insolvent since March, 1883, but does not know whether he was so prior to that date. His statement of affairs showed liabilities 600%. 18s. 1d., and total assets 370%. 3s. 1d., of which 45% was for stock, 110% for office furniture and fittings, 30% for household furniture, and 185% for book-debts, but one creditor is secured for 90% on the last item. The observations of the chief official receiver were as follows:—"The debtor states that he carried on a business at the Seven Sisters' Road for some years up to about March, 1883, which he then sold, and started at Tulse Hill. At that date he had also an interest in a chemist's business in Holywell Street, Strand, which he states that he sold about March, 1884. The agency business at Walbrook has been carried on for about four years past. He attributes his failure and deficiency chiefly to his expenses having been in excess of his profits, owing to the badness of his trade, and to a serious accident which incapacitated him from attending to business. The debtor has kept books for the purposes of his trading, but they are not such as sufficiently disclose his transactions and financial position." Appended is a list of the creditors:—

	£	s.	d.
Burgess, Willows & Francis, 101 High Holborn, W.C.	25	16	0
Colls, G., 68 Brunswick Place, E.C.	23	13	0
Choules, W., Tulse Hill	24	4	0
Churchill, J. & A., New Burlington Street	11	18	6
Idris & Co., Kentish Town	23	0	0
Kerby, G., 34 Surrey Street, Strand	68	7	7
Lloyd, T., 32 Nicholas Lane, E.C.	43	5	0
Meggeson & Co., Miles Lane, Cannon Street	41	5	0
Morris, H., Finsbury Pavement	16	6	2
Morgan, W. V., 42 Cannon Street	16	19	6
Maw, Son & Thompson, 7 to 12 Aldersgate Street, E.C.	10	18	0
Silverlock, H., Blackfriars Road	11	15	11
Thompson, Millard & Co. (Limited), Curtain Road, E.C.	32	0	11
Taylor, H. T., Dormington, near Hereford	25	0	0
Tench, R., 30 Walbrook, E.C.	14	18	0

(Twenty-three creditors under 10%.)

The liability for 90% is to Mr. E. Winter, of High Street, Epping, to whom the debtor gave a charge for the sum on a book-debt due to him from the trustees of the late Mr. J. H. Gent.

In reply to the chairman, the debtor said he was not in a position to make any offer to his creditors. No one having any question to put to Mr. Taylor, it was agreed that it was unnecessary to appoint any trustee. Adjudication in bankruptcy will be applied for in due course, and the Official Receiver will wind up the estate as quickly as possible.

MESSRS. GOODALL, BACKHOUSE & CO., of Leeds, state that they will deliver a copy of their Household Almanac for 1886 to every house in the United Kingdom. They have contracted for 400 tons of paper in order to carry out this benevolent intention.



#### ACTION FOR SLANDER BETWEEN MAKERS OF SHEEP-DIPPING COMPOSITION.

IN the Court of Queen's Bench on Jan. 12, 13, and 14, 1885, the case of Bradbury v. Timson was heard before Mr. Justice Wills and a common jury. Mr. Finlay, Q.C., and Mr. Archibald appeared for the plaintiff; Mr. Kemp, Q.C. and Mr. Houghton representing the defendant.

It seemed that the plaintiff formerly carried on business at Cheadle and Uttoxeter and Brighton, and afterwards at Liverpool and Birkenhead and Llandoverly, as a manufacturer of sheep-dip powder, while the defendant was a commercial traveller at Berkhamstead, in the employment of a Mr. Cooper, also a manufacturer of sheep-dip powder. The plaintiff complained that the defendant had systematically slandered him in going round to procure orders for his own employer. In four instances the defendant went to the plaintiff's customers, and stated that Mr. Bradbury was a swindler, that his sheep-dip powder was rubbish, that his works were of the smallest and most limited description, and that anybody who bought his powder would be throwing money into the sea. As the defendant pleaded justification Mr. Finlay explained that it would be necessary to show what course Mr. Bradbury had pursued in the past. He was at first a veterinary surgeon and chemist at Uttoxeter and Cheadle, but in 1870 he went to Brighton, where he carried on business for several years, though he was ultimately obliged to give it up owing to ill-health. On recovering he became a traveller for Messrs. Steiner & Co. and Mr. Coope and after being in their employment for some years he went into business with a Mr. Smith at Liverpool, as chemist under the style of "Smith & Co." Subsequently he determined to go into business as a manufacturer of sheep-dip powder, establishing a company for the purpose, but, as the company was not successful, he, in 1881, set up business on his own account at Llandoverly, and it was while he was there that the defendant made the statements now complained of. The plaintiff claimed 15,000% damages.

In support of the plaintiff's case Mr. Betts, of Towcester, Mr. Biddles, of Reading, and Mr. Blissitt, of Romsey, chemists, and Mr. R. F. Shillingford, veterinary surgeon, of Buckingham, deposed that the defendant called upon them and stated that in dealing with the plaintiff they were dealing with a swindling firm, that the works at Birkenhead were nearly broken up, and that his powder was worthless.

The plaintiff gave evidence as to the various businesses he had carried on, adding that so far as he knew no debts were left unpaid which he had incurred in the name of Smith & Co., at Islington, Liverpool, and Old Chester Road, Birkenhead. He had also sold cattle medicines and druggists' sundries in Seel Street, Liverpool. He could not be certain that he left no debts unpaid there, but since leaving he had had no application for the payment of any. Owing to the alleged slanders, and to the statements about his sheep dip his name was all over Liverpool. It was not true that he had used the name of Mr. Winchester, who was connected with a merchant's business at Liverpool, without the authority or knowledge of that gentleman. Mr. Winchester suggested that they should form a partnership with some other friends to bring out the sheep dip, but when the report got about Liverpool that he was a swindler, and that he was connected with a lough firm, the arrangement fell through. He formerly travelled for Mr. Cooper, the defendant's employer, and he brought an action against that gentleman for wrongful dismissal. In the statement of claim his name appeared as Samuel Smith Bradbury, but that was a mistake, his Christian name being Samuel William. He started selling sheep dip in 1876, and arranged to sell the business to a company for 7,500%. He did not think that an exorbitant



sum, but he had not received a shilling of the money. The business was at Birkenhead, and a good business was done until 1879. The whole of the money paid on account of the company from the beginning of 1876 to the end of 1880 was 3,393*l.*, and so far as he knew about 85*l.* of the debts remained unpaid. He went to Llandovery in 1880, because the company proved a failure and he had been ruined by it.

Cross-examined by Mr. Kemp, plaintiff said he now carried on a hotel at Walton-on-the-Thames. On leaving Uttoxeter he believed he sold his business for 80*l.*, but it was not true that the stock which he left partly consisted of chips and sawdust. When he carried on business at Brighton it was stated on his signboard that he was a member of the Pharmaceutical Society, but he was never a member of that society. He had no certificate from the Lord Chamberlain that he was a chemist to the Queen. He believed he left Brighton in debt. Some of his bills were paid, but others were left unpaid. His medical attendant at Brighton was Dr. Arthur, who in 1880 brought an action against him in the County Court. He believed that the statute of limitations was pleaded as a defence to that action, but that was his solicitor's plea. He only knew of one debt unpaid at Brighton, and that was to Messrs. Barron & Drew. He could not say whether he paid all his rates and taxes there. He did not lock up the premises at Birkenhead and leave rather suddenly, nor did he owe the landlord rent. In 1875 he carried on a wholesale business in Seel Street, Liverpool, as Smith & Bradbury. He signed the lease as S. S. Bradbury, but could not give any reason for that. When the company was formed he had a sum of 101*l.* at the bank, but he had stock besides, though he could not say how much it was worth. Two of the directors did not pay for their shares. He issued shares in the company in the name of a director two years after the death of that director, but he did it for the company.

Prior to the resumption of the case on January 15, counsel on both sides held a consultation, when it was agreed that a juror should be withdrawn.

The Judge remarked that that was a very proper termination of the case, if he might venture to say so. A juror was then withdrawn.

#### PURCHASING A BUSINESS.

##### *Stevenson v. Prebble.*

THIS action was opened in the High Court of Justice, Chancery Division, before Mr. Vice-Chancellor Bacon, on January 29, and adjourned to February 2. It was for the specific performance of a contract to purchase a chemist's business at 17 Lower Tulse Hill, London, S.W., for the sum of 775*l.* There was a counter-claim for damages, on the ground of misrepresentation of the returns of the business, which formed, also, the ground of the defence. The business was advertised in the trade journals in February, 1884. The defendant, who had recently sold his business at Upper Norwood, made inquiries about it, first of Mr. F. J. Brett and afterwards of Messrs. Gurdon, Berdoo & Co., both employed as agents by Mr. Stevenson. The amount of returns was represented to be 800*l.* per annum, and increasing; and the question if this representation was correct was the crucial point in the case. After negotiation, the defendant, Mr. Prebble, on May 6, signed an agreement to purchase the business for 775*l.*, and paid a deposit, subject to the landlord's acceptance of him as a tenant. Purchase was to have been completed on May 9, but the landlord's consent had not then been obtained. A draft for the amount due was then lodged in the bank in the joint names of the parties, and the defendant received possession of the business. The next day, Friday, the takings and bookings after 12 noon amounted to 19*s.* 11*d.*; on Saturday, with fine weather, only 2*l.*; on Sunday, 13*s.* 6*d.*; and on Monday 1*l.* 14*s.* The amounts were less than on any days in 1883. On the latter day purchase was to have been completed, but the smallness of the returns had roused the defendant's suspicion. He had also found a slip of paper in the prescription-rack unsigned, but bearing dates August 8 to August 14, with amounts placed opposite to them. The handwriting was the same as that in the prescription-book and day-book for the dates mentioned, and was, apparently, that of a temporary assistant. The defendant concluded that the paper was a statement of the total takings and bookings on the dates

mentioned, and on referring to the cash-book for the same period found that 11*s.* 6*d.* on the paper corresponded to 1*l.* 1*s.* 6*d.* in the cash-book, 13*s.* 6*d.* to 1*l.* 3*s.*, 17*s.* 6*d.* to 1*l.* 7*s.* 9*d.*, 5*s.* 4*d.* to 1*l.* 3*s.* 6*d.*, 9*s.* to 1*l.* 9*s.* 2*d.*, 1*l.* 0*s.* 3*d.* to 1*l.* 4*s.*, 11*s.* 3*d.* to 1*l.* 5*s.* 3*d.*, the inference being that the amounts had been fraudulently increased, so as to swell the returns to the amount stated for the year—804*l.* The defendant thereupon refused to complete the purchase without further trial, which was refused, and within a week offered to give up possession, which was also declined. Pending the settlement of the dispute, he was appointed receiver and manager of the business by the Court, and the returns had shown the same proportion to the alleged amount. Several persons who had acted as temporary assistants during the years 1882 and 1883 were called, who stated, from recollection, that the returns had not exceeded 1*l.* a day on an average, and had often been much lower.

The Vice-Chancellor, in summing up, said there was absolutely no evidence to support the charge of misrepresentation. The cash-book showed that the returns for 1883 amounted to 804*l.* On the other side was the evidence of temporary assistants, who forthwith attempted to speak from memory of the amounts taken on certain days. The slip of paper relied on was not evidence at all, and, if it were evidence, it proved nothing; it would show only the cash in the till, but did not touch the amounts that might have been hooked. Judgment was, therefore, given for the plaintiff, with costs of the action, and of the motion appointing the defendant as manager; the defendant to perform the agreement specifically, and to pay over the balance due on the business, with 4 per cent. interest to date.

THE Apollinaris Water Company have obtained an injunction against the Anglo-Hungarian Company, restraining the latter from sending out their mineral waters in wrappers which were alleged to be a colourable imitation of the wrappers used by the plaintiffs for Hunyadi Janos water.

A chemist in Chancery Lane was recently fined by the Board of Inland Revenue for selling a box of corn plasters designated on the label as "Alexander's." The chemist seems to have been very indignant, and a letter from him holding himself up as a cruelly-used martyr was published in one of the London dailies. But he surely ought to have known that the prefix of the name of a proprietor is regarded as claiming a proprietary right, and that when this claim is applied to certain articles intended for the relief or cure of certain diseases the article is subject to the medicine-stamp duty.

CUSTOM OF THE TRADE IN REGARD TO COMMERCIAL TRAVELLERS.—In a case heard last month (*Grimdon v. Master & Co.*) before Mr. Justice Lopes and a common jury, in the Queen's Bench division, the question at issue turned upon the right of a traveller to demand three months' instead of one month's notice of dismissal. The plaintiff had a written agreement, but it was silent on the point of notice. His remuneration was to be 130*l.* a year, and a percentage on the orders obtained by him. For plaintiff three travellers deposed that there is a well-recognised custom in trades generally that in the absence of special agreement a commercial traveller employed by the year is entitled to give or receive three months' notice. On the other side two commercial travellers were called, who deposed to the custom being for a month's notice; but one of these admitted that this would not apply where the traveller was paid wholly by commission, in which case the notice would be three months. Where the payment was partly by salary and partly by commission this witness thought the one-month rule would apply. The jury found for the plaintiff.

MEAT-JUICE.—Sippel recommends the following as the easiest way to obtain nearly all the juice:—

Cut 1 lb. of best lean beef in slices about  $\frac{1}{4}$  inch thick, and lay the slices one alongside of the other on a strip of muslin, 6 inches wide and 1 yard long, sprinkling with fine salt. Now roll up the whole strip, tie a string several times around, and put in an ordinary press. After half an hour, about  $\frac{1}{2}$  pint of red, transparent juice will be obtained.—*Pharm. Zeit. Russl.*, from *Am. J. Ph.*





[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]

- Absorbent Pad.**—194.—January 6, 1885.—Elizabeth M. Moore. An improved absorbent pad.
- Albuminous Matters.**—741.—January 19, 1885.—J. Lucas. A new or improved manufacture or production of albuminous matters.
- Aluminate of Soda.**—1,013.—January 23, 1885.—F. M. Lyte. Improvements in the manufacture of aluminate of soda.
- Attaching Cord, &c., to Corks and Bungs.**—198.—January 6, 1885.—F. W. Russell. Improvements in apparatus for attaching cord, wire, or analogous flexible material to corks and bungs.
- Beds for Surgical Purposes.**—1,419.—February 2, 1885.—G. Woodburn. Improvements in beds or couches applicable for surgical purpose.
- Bottle-crate.**—873.—January 21, 1885.—F. Foster. Partitioned bottle-crate.
- Bottle filler.**—326.—January 9, 1885.—N. G. and N. St. G. Willocks and A. Stockall. Improvements in apparatus for filling bottles with "syruped" or flavoured beverages.
- Bottles and Stoppers.**—234.—January 7, 1885.—G. A. and S. Spencer. —571.—January 15, 1885.—H. B. Creeke and M. Dempster. —863.—January 21, 1885.—J. Rebblu. —1,086.—January 26, 1885.—H. Agar.
- Bottle Stopper, &c.**—1,243.—January 29, 1885.—T. Hill.
- Bottle-tools.**—1,245.—January 29, 1885.—D. Rylands. —1,328.—January 30, 1885.—H. Agar. —1,049.—January 24, 1885.—T. Turner. Improvements in tools employed in the manufacture of glass bottles.
- Bottles, &c.**—823.—January 20, 1885.—W. Stobbs. —1,143.—January 27, 1885.—J. R. Dedicoat.
- Bottles, Closing and Opening.**—663.—January 17, 1885.—S. Bunting. An improved method for closing and opening bottles containing aerated waters. —1,081.—January 26, 1885.—S. Bunting.—An improved method of closing and opening bottles, jars, cans, &c.
- Bottles, Opening.**—191.—January 6, 1885.—W. Edwin and C. Bailey. —361.—January 10, 1885.—J. T. Creasy and A. T. J. Wild, jun. —650.—January 16, 1885.—J. Kay and G. Jackson. —737.—January 19, 1885.—N. Booth. —1,434.—February 2, 1885.—W. A. Balcon.
- Bottles, Stopping.**—283.—January 8, 1885.—G. F. Redfern.—A communication from A. B. Vancs. —329.—January 9, 1885.—J. N. Drouson and C. B. Harness. —349.—January 10, 1885.—R. W. Little. —377.—January 10, 1885.—J. V. Sharpe. —401.—January 12, 1885.—B. Weldon. —402.—January 12, 1885.—B. Weldon. —454.—January 13, 1885.—H. C. Walter. —534.—January 14, 1885.—W. Cullmann & A. Sieber. —584.—January 15, 1885.—W. P. Adams. —744.—January 19, 1885.—J. C. Schultz. —844.—January 21, 1885.—R. Waycott. —854.—January 21, 1885.—S. Davey. —862.—January 21, 1885.—M. L. Macaulay. —1,158.—January 27, 1885.—J. Evans. —1,239.—January 28, 1885.—M. & A. Mackay. —1,272.—January 29, 1885.—R. Holmes. —1,430.—February 2, 1885.—T. H. Briggs.
- Boxes for Pomatum, &c.**—758.—January 19, 1885.—J. Rogers.—An improvement in boxes for containing pomatum, ointment, and other greasy substances.
- Bronchitis-kettles.**—874.—January 21, 1885.—A. G. Bayley. Improvements in or connected with bronchitis-kettles.
- Brushes for Cleaning Bottles, &c.**—589.—January 15, 1885.—J. K. Rogers and A. Applegate. Improved manufacture of brushes for cleaning bellied bottles, jars, and the like.
- Chest-expander.**—853.—January 21, 1885.—Theresa Kcaue. Improvements in chest-expanders.
- Chlorine, &c.**—731.—January 19, 1885.—T. Twynham. Improvements in the production of chlorine and hydrochloric acid from solutions of chloride of calcium.
- Cleansing, &c., Oils.**—274.—January 8, 1885.—B. Rhodes. Improvements in the means employed for cleansing or purifying and improving the quality of oils or grease, such as mineral oils, black or recovered oils, seal oils, and the like.
- Corn-cure.**—1,207.—January 28, 1885.—E. Pohl.
- Detergent Composition.**—1,354.—January 30, 1885.—J. Dinning.—A composition for removing old paint, varnish, or paper and rust or other impurities from wood, plaster, or other surfaces.
- Disinfecting apparatus.**—843.—January 21, 1885.—J. Robertshaw and J. T. Turner.

- Drawing Corks, &c.**—216.—January 6, 1885.—W. R. Lake.—A communication from Société Jacquier Frères. Improvements relating to the provision of means for drawing or inserting the corks of bottles or other vessels.
- Drawing Measured Quantities of Liquids from Casks, &c.**—943.—January 22, 1885.—W. Varasour. Improvements in taps or apparatus for drawing measured quantities of liquids from casks and other vessels, and for indicating the quantities drawn and the person who has drawn same.
- Drying Colour-paste, &c.**—275.—January 8, 1885.—E. Passbury. Process and apparatus for drying colour-paste and other strongly-aqueous materials.
- Feeding-bottles.**—780.—January 20, 1885.—E. Hall. —781.—January 20, 1885.—E. Hall. Improvements in infants' feeding-bottles.
- Filling or Charging Bottles.**—823.—January 20, 1885.—A. Clark.
- Filters and Filtering.**—1,401.—Jan. 31, 1885.—H. J. Haddan.—A communication from K. Trobach. —908.—Jan. 22, 1885.—G. H. Ellis. A new or improved process for the manufacture of a filtering deodorising, and decolourising substance or medium from carbonaceous or lignite clay. —319.—January 9, 1885.—J. W. Ingham. —403.—January 12, 1885.—H. Harris. —590.—January 15, 1885.—G. Hayercraft. —903.—January 21, 1885.—J. H. Jacobs. Improvements in filters.
- Furniture-cream.**—561.—January 15, 1885.—R. Williamson. Preparing and making a furniture-cream.
- Granulated Soap.**—256.—January 8, 1885.—E. Wilson. A new method of manufacturing granulated soap.
- Liquid-measurer.**—862.—January 21, 1885.—J. Humphrey. Improvements in apparatus for measuring fluids or liquids.
- Magnesium.**—1,031.—January 24, 1885.—E. von Püttner. Improvements in the extraction of magnesium.
- Medicating Atmospheric Air.**—1,368.—Jan. 31, 1885.—W. Hibbert. Improved apparatus for purifying and medicating atmospheric air, and distributing the same where required.
- Obtaining Sulphur.**—740.—January 19, 1885.—E. F. Trachsel. An improved method or process of treating sulphides of calcium to obtain sulphur and other products. —756.—January 19, 1885.—E. F. Trachsel. An improved method or process of decomposing bisulphide, hydrosulphide, or sulph hydrate of barium or of strontium to obtain sulphur and other products.
- Oils for Medicinal Purposes.**—1,399.—January 31, 1885.—W. G. Radley. Improvements in the preparation of oils for medicinal purposes.
- Securing Corks in Bottles, &c.**—1,445.—February 2, 1885.—E. E. Davil. An improved appliance for holding or securing corks in bottles or like receptacles.
- Separating Micro-organisms, &c., from Liquids.**—545.—Jan. 14, 1885.—T. R. Shillito.—A communication from Dr. K. Müller. Improvements in the method of separating micro-organisms and their germs from liquids.
- Sodium and Potassium.**—1,305.—January 29, 1885.—C. A. Fanre. For improvements in the manufacture of sodium and potassium.
- Soap, &c.**—1,080.—January 26, 1885.—W. G. Little. For improvements in the manufacture of soap and disinfectants.
- Softening Water.**—830.—January 20, 1885.—J. Hanson. For improvements in softening water.
- Sterilising Liquids.**—777.—January 20, 1885.—W. P. Thompson.—A communication from H. Danvers and C. Bretta. Process for sterilising liquids, and apparatus therefor.
- Stoppers and Necks of Bottles.**—844.—January 21, 1885.—R. Waycott. For improvements in stoppers and necks of bottles.
- Squeezing Juice from Lemons, &c.**—1,287.—January 29, 1885.—F. H. Chesebrough and H. Copping. Improvements in an apparatus for squeezing the juice from lemons and other fruit and substances.
- Syphon-bottles.**—554.—January 14, 1885.—W. R. Lake.—A communication from G. Stollwerck.
- Syruping, &c., Aerated Waters.**—265.—January 8, 1885.—J. Lyon and T. Criebley. —769.—January 20, 1885.—T. H. Duckworth and S. Wright.
- Treating Animal Bladders for Bottles, &c.**—653.—January 16, 1885.—J. Bailly. Improvements in the treatment of animal bladder and gut to be used in capping, capsuling, covering, and wrapping bottles, jars, and other articles.
- Toothbrush.**—434.—January 13, 1885.—J. Willis. A new improved toothbrush, especially adapted for cleansing tender or decayed teeth. —936.—January 22, 1885.—A. B. Harrison. Improvements in toothbrushes.
- Vanilline.**—1,006.—January 23, 1885.—C. A. Day.—A communication from A. Scheidel. Improvements in the manufacture of vanilline.

Specifications published during the month:—

Postage 1d. each extra.

1884.

579. M. Williams. Drying-oils. 4d.

1,081. J. Blocksidge. Stopping bottles, &c. 2d.



- 1,443. W. H. K. Bradford. Corkscrews, &c. 6d.  
 2,113. E. Lawton. Cure of syphilitic and gonorrhoeal diseases. 2s.  
 2,202. A. P. Scrase and W. Carter. Filling bottles with aerated liquids, &c. 6d.  
 3,005. C. S. Young. Lock-up apparatus for liquor frames, &c. 6d.  
 3,063. J. H. and J. W. Galloway. Filling and syringing artificial beverages, &c. 6d.  
 3,086. M. Finch, W. J. and S. Willoughby. Manufacturing sulphuric acid. 6d.  
 3,578. F. B. Hill. Filters. 6d.  
 3,593. W. R. Lake. Filtration and purification of water, &c. 8d.  
 3,673. C. Wigg and J. W. Pratt. Manufacture of soda and chlorine. 4d.  
 3,736. W. A. Byrom and J. A. B. Bennett. Taking off the volatile products from coal, &c., during distillation. 6d.  
 3,751. A. McGuffie. Compound for curing phthisis, &c. 2d.  
 3,911. T. Hill. Bottle soaking and washing machines. 6d.  
 3,977. W. R. Lake. Syphon-bottles. 6d.  
 4,089. H. Riviere. Belts or supports for the spine, &c. 6s.  
 4,238. S. G. Thomas. Manufacture of alkalies and alkaline salts. 2d.  
 4,354. E. Eskell. Box for tooth-powders, &c. 6d.



#### PARTNERSHIPS DISSOLVED.

- DALE & HISLOP, Edinburgh, stamp and die cutters. December 31. Thomas R. Dale and John Hislop.  
 FREEMAN, SAMUEL & SON, Leeds, agents for the importation of olive oils and general and ordinary agents; and at Hull, as J. E. Freeman. January 2. (Samuel Freeman and John Edward Freeman.)  
 ALBRAITH, GRANT & CO., Whitecross Street and White's Yard, distillers and rectifiers of spirits and makers of cordials and methylated spirits and general wine and spirit merchants. December 31. (William Robert Galbraith and George Grant.) Debts by Grant.  
 GILDEA & WALKER, Dalehall, Burslem, and Holborn, City of London, manufacturers of earthenware. January 13. (James Gildea and John Walker.) Debts by Gildea.  
 ALL & BRERETON, Little Island, County Cork, chemical manufacturers. December 31. (Edgar Hall, jun., and John Brereton.)  
 LITON, THOMAS, Vittoria Street, Birmingham, opticians, spectacle and eyeglass makers. January 1. (Charles Clarke and Alfred Clarke.)  
 OLLAND, WILLIAM, Preston, brush manufacturers. January 1. (Mary Holland, Elizabeth Holland, Margaret Holland, and George Hiram Holland.) Debts by G. H. Holland.  
 MACALISTER & COLTART, Clyde Chemical Works, O'd Keppocbill Road, St. Rollox, Glasgow, chemical manufacturers. December 31. (Andrew Macalister and M. G. Coltart.) Debts by Coltart.  
 MAGGS & SON, Yeovil, chemists and druggists. December 31. (Thos. C. Maggs and Frederick Richard Maggs.) Debts by F. R. Maggs.  
 SPENDIFF, G. & W., Ospringe Street, Ospringe, mineral-water manufacturers. January 1. (George Spendiff and William Spendiff.) Debts by G. Spendiff.

#### RECEIVING ORDERS.

- OMLEY, EDWIN, 34 Hoxton Square, and 19 Charles Square, Hoxton, trading as Comley & Son, bone, tooth, nail, and hair-brush manufacturer. January 23. Exam. March 4, 11, at 34 Lincoln's-Inn-Fields. High Court of Justice.  
 ULL, GEORGE, 77 Smallbrook Street, and Edgbaston Road, Birmingham, druggist and drysalter. January 13. Court—Birmingham.  
 GOOD, DAVID, 4 Wellington Street, and 2 Dubb Lane, Bingley, chemist and druggist. February 4. Exam. February 20, 12. Court—Bradford.

#### ADJUDICATIONS.

- TUNT, CHARLES JARED, 172 Southampton Street, Camberwell, soap manufacturer. January 23. High Court of Justice.  
 OMANS, THOMAS, Wrotham, chemist and druggist. January 23. Court—Tunbridge Wells.

#### COMPANY WOUND UP.

- OXFORD CELLULOSE COMPANY (Limited). December 20, by Vice-Chancellor Bacon. On pet. of S. H. Beckles, 6 and 8 Lime Street Square, trading as S. H. Beckles & Co., chemical manufacturers. Sols.—Lindo & Co., 80 Coleman Street. By order.

#### DIVIDEND.

- MARSHALL, ARTHUR WILLIS, Chorlton-on-Medlock, chemist. Div. 3s. 0½d. on January 16, at Off. Rec. Offices, Ogden's Chambers, Bridge Street, Manchester.

## Personalities.

MR. F. ALLIS, of Tewkesbury, has retired from business, and is succeeded by Mr. George R. Barlow, from Congleton.

DR. ALFRED HILL, of Birmingham, has been elected President of the Society of Public Analysts.

MR. FREDERICK PARSONS, of 30 Gallowtree Gate, Leicester, has sold his business at that address to Mr. Joseph Young, of 16 Gallowtree Gate, in the same town, who will unite the two businesses at the latter address.

DR. WILLIAM B. MEANY, representing the Rumford Chemical Works, Providence, Rhode Island, U.S., is at present visiting this country with the special object of directing the attention of the medical profession to the merits of Horsford's acid phosphate.

THE will of Mr. Charles Gosnell, late of Red Bull Wharf, Upper Thames Street, manufacturing perfumer, who died on September 15 last, at Feltham, was proved on January 13 by Mrs. Anna Martha Gosnell, the widow, and Mr. Charles Augustus Gosnell and Mr. Charles Percy Gosnell, the sons, the executors, the value of the personal estate amounting to over 44,000l.

A LARGE company are to dine together at the "Albion," Aldersgate Street, this (Saturday) afternoon, at the invitation of Mr. Charles Maw, to celebrate the majority of his eldest son, Mr. C. T. Maw. The party will consist of a few personal friends and about 200 of the principal employés of the firm of Messrs. S. Maw, Son & Thompson. The remainder, numbering something over 170, will each receive a week's wages.

## Trade Notes.

By an oversight the name of Messrs. Hearn, Riddell & Co. was omitted from the index of bottle merchants in the last issue.

MR. CRAUFUIRD DICKEY, of Pavilion Place, Chiswick, sends us a sample of carbolised pearl dentifrice in which the odour of the carbolic acid is well disguised.

MESSRS. BRATBY & HINCHLIFFE, of Manchester, have commenced the publication of a "monthly list" of novelties, &c., in the aerated-water trade, which they will send free on application. The list gives particulars of a number of second-hand goods.

MR. ARCHIBALD PATERSON, Govan Road, Glasgow, is offering court-plaster by the yard, at low prices, for cutting up into pennyworths. He claims that it is of very good quality for such purposes, and his offer suggests a small source of profit not to be despised in these hard times.

It is stated in a circular by one of the English makers of tartaric acid, that it has become a frequent habit of late to sell as English powdered tartaric acid a product which has only been ground in England, and which contains a large proportion of oil of vitriol and lead.

MR. JOHN ROGERS, of Belfast, has set up machinery to make round boxes for his axle-grease, in the style adopted by some American houses and very popular in some parts of Great Britain and the colonies. Each box contains 1½ lb. of axle-grease. This is of a petroleum origin, but consists, we are informed, of lubricating oils exclusively.

A SAMPLE of pure essence of beef, prepared by the London Manufacturing Company (J. M. Richards, Holborn Viaduct, wholesale agent), has been placed in our hands. It is made by chopping beef, stewing it in its own juice in earthen jars, straining, and filling the liquid into tins or glasses. When cold it forms a jelly of tempting transparency. We have had an opportunity of trying it on an invalid, who finds it pleasanter to the taste and lighter to the stomach than usual. It is a new idea to put up this jelly in glass jars, and we believe it will be found decidedly attractive.



MR. C. W. FIELD, of Liverpool, who for some years has been engaged in the preparation of fruit essences, has added to his business the manufacture of saponine, capsicine, gingerine, &c.

MR. WILLIAM TOOGOOD, of Mount Street, has brought out new feeding-bottles, which he designates the "Westminster." They are offered in the usual 6*z*. and 1*s*. styles, the better one being packed in a box and made of white glass. Both have bent necks and glass screw stoppers. The screws, both on the stoppers and in the neck of the bottle, seem extremely well made.

CAUTION TO CHEMISTS.—Mr. E. Divers, of the Imperial College of Engineering, Tokio, Japan, reports in the *Chemical News* that, in seeking to remove the stopper of a bottle containing phosphorus trichloride, the bottle burst violently, and a piece of glass struck and seriously injured his right eye. He supposes that by the gradual entrance of moisture some hydrochloric acid had been formed in the bottle.

MR. E. CANT, formerly with Messrs. Allen & Hanburys, has undertaken the management of the business of Messrs. F. Chevalier & Co., makers of perles, or flexible capsules, 17 Bartholomew Close. These capsules are now supplied in Jahneke's metallic boxes in shapes suitable for the pocket, and the box is divided inside into separate compartments for each capsule. A great number of new medicines, powders, and fluids are put up by this firm in capsule form, and they are prepared to add others if required.

THE directors of Bryant and May (Limited) state that for the half-year ending December 31, 1884, the net profits of the business, after providing for directors' remuneration, expenses of management, interest on debenture stock, maintenance of premises, plant, and machinery, and all other expenses, amount to 33,044*l*. The directors recommend that this amount be appropriated as follows:—To payment of a dividend at the rate of 12 per cent. per annum, 18,000*l*.; to writing off preliminary expenses account, 1,187*l*.; to writing off new buildings account, 1,397*l*.; to reserve fund (invested in consols), 10,000*l*.; leaving 2,459*l*. 16*s*. 4*d*. to carry forward to next account.

THE extent to which clinical thermometers are now employed in medical treatment is indicated by a statement lately made to us by Messrs. E. Greenwood & Co., of 11 Mildmay Park, N., that since starting in business, three



and a-half years since, they have sold over 4,000 gross of these instruments. Their clinical thermometers are very much appreciated. As will be seen by the engraving, the mercury column is divided a little above the air-space by a knife-edge contraction in the mercury tube, which divides the column and causes it to serve as a perfect self-indicator, no indicating-needle being necessary. Messrs. Greenwood & Co. are now putting up for chemists morocco cases containing seven varieties of clinical thermometers. The case and the thermometers themselves can have chemist's name if desired.

## Trade Report.

THE official returns for the first month of the year do not indicate any hopeful features in regard to the national trade. The imports for the month are slightly larger than last year, but the exports show a considerable decrease. The totals are as follows:—

	Jan., 1884	Jan., 1885
Imports .. .. .	£ 35,645,221	£ 36,049,005
Exports .. .. .	£ 19,352,541	£ 18,109,525

Subjoined are our usual details:—

### Imports.

	Jan., 1883	Jan., 1884	Jan., 1885
Quicksilver .. .. .	27,150	346,270	326,25
Alkali .. .. .	2,191	27,302	29,28
.. .. .	3,143	2,175	4,78
.. .. .	4,077	1,876	3,31
Brimstone .. .. .	31,846	57,533	75,02
.. .. .	9,474	16,164	17,93
Chemical manufactures and pro-			
ducts, unenumerated .. .. .	141,811	119,414	105,87
Cochineal .. .. .	1,991	1,400	92
.. .. .	13,873	7,145	5,03
Dyes (coal-tar)—			
Aniline .. .. .	24,163	13,939	25,01
Alizarine .. .. .		11,343	14,51
Other coal-tar dyes .. .. .		130	38
Indigo .. .. .	24,852	23,376	17,08
.. .. .	623,222	603,148	431,40
Madder, madder-root, garancine,			
and munjeet .. .. .	2,309	993	2,28
Madder, madder root, garancine,			
and munjeet .. .. .	2,647	1,457	3,06
Nitre, cubic (nitrate of soda) .. .. .	177,302	112,654	256,71
.. .. .	109,543	57,285	116,62
Saltpetre .. .. .	56,394	27,330	22,89
.. .. .	48,801	26,420	19,00
Oils—			
Cocoonut .. .. .	3,197	18,499	30,84
.. .. .	5,122	31,522	46,24
Olive .. .. .	2,544	2,033	1,57
.. .. .	97,285	82,238	65,17
Palm .. .. .	53,512	52,100	71,38
.. .. .	94,505	99,108	105,74
Petroleum .. .. .	5,195,212	4,694,445	7,401,68
.. .. .	153,719	164,192	221,42
Seed, of all kinds .. .. .	943	733	810
.. .. .	33,542	24,485	25,31
Train, blubber, and sperm .. .. .	882	700	950
.. .. .	33,159	23,358	34,28
Turpentine .. .. .	19,282	57,505	35,42
.. .. .	35,377	78,214	37,92
Bark, Peruvian .. .. .	10,857	6,911	13,56
.. .. .	137,995	81,237	117,410
Gum—			
Arabic .. .. .	8,337	7,034	7,922
.. .. .	19,435	19,238	31,215
Lac, seed, shell, stick, and dye .. .. .	10,771	14,162	10,593
.. .. .	42,878	65,182	36,614
Drugs, unenumerated .. .. .	78,331	66,680	67,514

### Exports.

	Jan., 1883	Jan., 1884	Jan., 1885
Alkali .. .. .	523,688	477,222	528,656
.. .. .	150,817	153,005	153,674
Bleaching materials or preparations .. .. .	124,800	120,334	114,963
.. .. .	26,490	50,128	41,438
Manure (chemical) .. .. .	191,059	213,092	152,434
Medicines, comprising drugs and .. .. .			
.. .. .	72,180	76,000	69,334
Other articles .. .. .	175,044	160,313	148,093

### Foreign and Colonial Products Exported.

	Jan., 1883	Jan., 1884	Jan., 1885
Bark, Peruvian .. .. .	3,440	3,641	10,768
.. .. .	34,129	22,030	55,549
Chemical manufactures and pro-			
ducts, unenumerated .. .. .	14,228	22,285	22,555
Cochineal .. .. .	837	765	789
.. .. .	5,678	4,411	5,571
Gum—			
Arabic .. .. .	1,601	5,709	1,241
.. .. .	3,632	18,910	4,527
Lac, seed, shell, stick, and dye .. .. .	7,297	2,831	5,192
.. .. .	34,778	12,750	18,084
Indigo .. .. .	7,624	8,725	5,344
.. .. .	176,596	208,033	114,713
Oil—			
Cocoonut .. .. .	8,858	7,725	7,718
.. .. .	15,532	13,169	12,668
Olive .. .. .	380	123	124
.. .. .	16,358	6,345	6,727
Palm .. .. .	27,562	24,860	54,549
.. .. .	44,872	47,417	85,229
Petroleum .. .. .	43,230	83,554	61,867
.. .. .	2,489	3,584	2,830
Quicksilver .. .. .	38,436	328,622	189,297
.. .. .	2,055	22,828	15,504



## MINCING LANE, February 12.

Notwithstanding the many obstacles continually presenting themselves to the detriment of trade generally, indications of a steady revival of business are not wanting, which lead us to think that a gradual recovery from the late depression is commencing to take place.

We referred in our last report to the improvement in trade in the United States. This has been fully maintained, and, further, as the complications between France and China increase, and our own difficulties in the Soudan become greater, most articles of Eastern production are becoming more firmly held, some at already enhanced values.

The reduction in the Bank rate to 4 per cent. upon the 29th ultimo, from 5 per cent., at which it was fixed November 6 last, was a welcome change, and one likely to stimulate business in the produce markets.

The drug sales on the 5th inst. were all got through in the day, higher limits in many instances being placed upon gums and other Eastern produce, and generally a firmer tone on the part of holders of all articles was evinced.

An event recently occurred in the drug sales condemnatory of the growing practice of adding what are called "star," or extra, lots. One very fine package of a certain drug was offered and sold at a good price, the buyer being led to pay more for it by the fact of it being the only case of the kind advertised in the day's sales, but immediately after a "star," or non-advertised, lot is offered and sold for less money to another purchaser. The first buyer naturally complains, and the second buyer as naturally claims his lot.

How the matter was finally settled we know not, but if it were once for all agreed upon in the sale-room that under no circumstances should goods be offered which do not appear advertised on the day's catalogues, such events could not possibly occur. The interval of a fortnight between these sales is not a long one, and it appears to us that goods not ready for one sale ought to be held over to the next, or sold during the interval privately.

**ACIDS.**—*Citric* remains in a very quiet state at unchanged price of 1s. 4 $\frac{1}{2}$ d. per lb. *Tartaric* has met with much more business of late, without, however, influencing prices.

**OXALIC.**—More business at 6d. per lb.

**ALOES.**—Seventy-one packages East India socotrine offered in last sales were all bought in at 8l. to 8l. 6s. per cwt. Of 69 packages Cape 21 sold at from 24s. 6d. to 36s. 6d. per cwt.

**ALUM.**—During the last week there has been considerably more inquiry, but prices remain unchanged.

**ANTIMONY.**—Crude steadily held at 22l. per ton; regulus weaker, at 40l. per ton. These are the ruling prices for 1-ton lots, although it must be understood that still lower figures are accepted for the large 20-ton lines of the metal market.

**BALSAMS** appear to have lost a large portion of their former demand, and the limits at which Peru, Tolu, and Capivi were bought in last Thursday week were even less than those of previous sales.

**BARK.**—The better prices obtained of late for Cinchona qualities caused the very large quantity of nearly 5,000 packages to be offered in the sales of the 10th inst. Of 2,600 packages South American barely 150 sold, but of 1,900 packages East Indian offered about 1,550 found buyers, and some 150 packages of Java were nearly all sold. Prices were irregular, and, if anything, tended in buyers' favour. The export demand, however, continues good, and stocks are now reduced to about 80,000 packages, or, say, an average year's requirements.

**BISMUTH.**—Although this metal has been found in England, Norway, Sweden, France, and America, the German production has of late years been so developed that at the present time it quite controls the market. Besides the chemical products of bismuth, it is much used in solder, pewter, and other alloys and fusible metals, so that abnormal prices for this useful article would affect, more or less seriously, numerous industries.

**BLEACHING POWDER** has given way in price, and is now quiet at 7l. 10s. per ton, ex warehouse.

**BORAX.**—There is business doing at 40s. per cwt.

**BROMINE** is still held for high rates. Though widely distributed, this useful element is nowhere abundant. The largest supplies come, perhaps, from the salt-mines of Stassfurt, Germany, in which country its conversion into the various bromides used in photography consumes the whole or best part of the production. American bromine is now also largely utilised at home, and some very well made bromide of potassium is being regularly shipped to England.

**CALUMBA ROOT.**—61 bags offered in last sales were all bought in at various rates, ranging from 24s. to 47s. 6d. per cwt.

**CAMPHOR.**—Raw Japan is firmly held for 57s. per cwt., re-weights, and an equally strong position rules with regard to the Chinese production, which is likely to be materially affected should French war operations develop much further, to the stagnation of Chinese industries. During the last few days makers of refined qualities have assumed a very firm tone.

**CAMPHOR OIL.**—Japanese oil was again offered in last drug sales to the extent of 84 cases, which were all bought in at 5d. per lb.

**CANTHARIDES.**—Russian maintain the high value of about 7s. per lb.

**CARDAMOMS.**—We stated in our last report that demand was limited, and prices have since given way about 10 per cent. Good Ceylon Malabar sorts are worth 5s. 6d. per lb. Of 240 packages offered in last sales, various qualities, nearly half sold.

**CASSIA LIGNEA** remains in very poor demand at 27s. to 27s. 6d. per cwt.

**CASTOR OIL** is a trifle lower. Of 100 cases Coconada seconds offered in last sales 70 were sold at 3 $\frac{1}{2}$ d. per lb. Firsts remain worth 3 $\frac{3}{4}$ d. to 4d. per lb.

**CLOVES** have been in more demand, which has, however, given way a little during the last day or two. Prices for fair Zanzibar quality are from 5 $\frac{3}{4}$ d. to 5 $\frac{1}{2}$ d. per lb.

**COCHINEAL.**—There is no business doing, although prices remain firm.

**COCOA-LEAVES.**—None offered in last sales.

**COD-LIVER OIL.**—25 casks pale Norwegian oil were offered in last drug sales, only 5 selling at 5s. per gallon, rest bought in. The demand for this article remains very small.

**CREAM OF TARTAR** lacks demand, although the raw material is still reported to be scarce in France. 127s. 6d. per cwt. is now price for first quality, ex London warehouse.

**CUBEBS** again have a hardening tendency. Stocks here are small, and of what there is some parcels are not of favourite quality. It is, moreover, rumoured that the Americans are again "cornering" the article. 20 bags were offered in last sales, and bought in at 12l. per cwt., since when more money has been paid, and now 13l. is the quotation for fair natural berries.

**ERGOT OF RYE**, notwithstanding exceedingly low limits, entirely fails to attract buyers.

**ESSENCE OF LEMON.**—By recent advices from Sicily this article appears to us to have touched its lowest point, and already some shippers talk of advanced rates, although most consumers being at the moment supplied, such advances, if urged, would probably remain for some time nominal pending a renewed demand, and speculation in an article of this description is not likely to take place.

**GALLS.**—Good China have made 53s. per cwt.

**GINGER.**—As might have been anticipated from our last month's report, ginger has given way in value for all qualities. With an article of so many different sorts it is difficult to define the position of a falling market, but we shall not be far out in stating prices to be about 10 per cent. lower all round.

**GUM ARABIC.**—This article being peculiarly influenced by operations in the Soudan, it is impossible at the moment to make any useful quotations. Of course the unhappy events of the last few days have caused holders of Turkey sorts to be very firm, as a long campaign would in all probability necessitate a great falling-off in the gum industry.

**GLYCERINE** remains in a steady position at unchanged rates.



**HONEY.**—Very large quantities remain on the market; 140 packages offered in last sales all bought in at 41s. to 42s. per cwt.

**TODINE** remains in steady demand at last prices, although recent business has been only on a limited scale.

**IPECACUANHA** is in an improved position, and of 30 serons offered in last sales half sold at advanced rates of 3s. 1d. to 4s. 7d. per lb., according to quality. The present stock is a small one, being only 130 packages, and deliveries are exceeding arrivals.

**ISINGLASS.**—At the public sales held January 27, the large quantity of 590 packages East India was offered, and met a very sluggish demand, only 120 packages finding buyers at generally easier rates, with the exception of Penang tongue, which made from 2d. to 3d. per lb. more than in previous sales. The next sales take place 24th inst.

**JALAP.**—No change; Vera Cruz, 7½d. per lb.

**KAMALA** dearer; price now asked, 1s. 2d. per lb.

**LEMON JUICE** meets with very little business; price continues nominally 17l. per pipe f.o.b. *Messina*.—Latest advices make prices firmer there, although as yet there is no improvement in the business done here.

**MENTHOL CRYSTALS** maintain former values of 35s. to 40s. per lb., but business of late does not appear to be as important as it used to be in this article.

**MORPHIA SALTS** are lower, in consequence of the easy position of opium and lessened inquiry; present quotation, 5s. 6d. per oz.

**MUSK** is in steady demand. Tonquin of good quality at 80s. to 85s. per oz. Yunnan, 42s. per oz. for quantities.

**OPIUM** is in a very quiet state, and the business at present doing is of a most restricted character.

**OILS.**—*Aniseed* quiet, at 6s. 7d. per lb. *American Peppermint Oil*.—H. G. Hotchkiss has further advanced, and is now quoted 17s. per lb. We are not aware that large quantities have been sold at this price, but several small transactions have been reported. Although during the last six weeks considerable business has undoubtedly been done in the article, the tone of the market during the last few days has been of a quieter character. *Japan Peppermint Oil* is now quoted from 14s. to 15s. 3d. per lb.

**OTTO OF ROSES** continues in a very firm position, and during the last few days a fairly important inquiry has sprung up. Having regard to the smallness of last year's yield, and the present firm position of the Constantinople market, we see no reason to expect any relaxation of prices this season.

**PETROLEUM OIL.**—A very quiet market, at slightly lower rates. Spot, 6½d. to 6¾d. per gallon.

**PETROLEUM SPIRIT** cheaper, at common 6¼d., refined 6½d., per gallon.

**PIMENTA.**—Although some large deliveries have of late somewhat reduced the heavy stocks, they still remain great, and fine bright quality is obtainable at 2d. per lb.

**POTASH CHLORATE** maintains a firm position at 6d. per lb., and prompt delivery is difficult to obtain. Bichromate continues steady at 3½d. per lb.

**POTASSIUM BROMIDE.**—Some fine American make is now being sold at slightly under English prices.

**POTASSIUM IODIDE** continues in good consumptive demand at 12s. per lb. English make.

**QUASSIA WOOD** nominally worth 4l. to 5l. per ton.

**QUICKSILVER** continues to meet with only small business, actual price about 6l. 13s. per bottle.

**QUININE** shows no change in prices, and at the moment the late large transactions appear to have quite satisfied consumers' wants. Makers generally, however, so far as we can judge, show no inclination to reduce rates, although as no combination of any sort now exists, individual action of manufacturers is, of course, under no control.

**RHUBARB** is in improved demand, Shenshi being worth 2s. 9d. to 3s. 6d. per lb., and Canton 1s. 5d. to 2s. per lb., according to quality.

**SAFFRON.**—The remarks we made in our last report have been fully justified by events since. Attracted by the low

prices then ruling, buyers came freely into the market, and very considerable business has been done, not only for actual requirements, but such low prices not having been touched for years many have been induced in a speculative spirit to lay in considerable stocks. So many articles have of late been obliged to be sold under cost of production that it is not much of an argument to suggest with regard to saffron were it otherwise we should soon expect to see a rapid recovery. We fully believe, however, that the lowest figure have been reached, and a steady improvement in values must be looked for.

At the commencement of the season it is the custom for many French speculators to operate in the article, buying at the first deliveries upon the Spanish markets. If the crop moderate or small these proceedings turn out well for the speculator, but if, as was the case this season, the crop prove to be an unusually large one, supplies pour in, the market gets beyond control, and many of these speculators being quite unable to hold for any length of time, it becomes a case of *saute qui peut*, and a collapse ensues.

When it is considered that saffron-bulbs require replanting every third year in rows 6 inches from each other, the bulbs 3 inches apart in the rows, it will be understood that the labour, although performed by women and children, is sufficiently costly. Moreover, the first year's yield seldom exceeds 2 lbs. to the acre, the second and third years averaging about 12 lbs. to the acre. Thus, about 25 lbs. saffron has to pay three years' rent of an acre of land, planting, cleaning, picking, drying, &c.; and when all the other charges of packing, shipping, freight, insurance, and London warehouse are considered, we fear the Spanish farmer is not having a much better time of it just now than his English confrere.

**SAL AMMONIAC.**—Price has been reduced to 33s. to 40s. per cwt.

**SALTPETRE.**—Refined unchanged, but more inquiry for the raw material.

**SARSAPARILLA.**—Owing to less offering, Jamaica slightly dearer, at 1s. 10d. to 2s. per lb. for good quality.

**SODA CRYSTALS** are firmer at slightly improved prices. 2l. 16s. 6d. per ton ex ship London, and 2l. 10s. per ton Tync. *Caustic* and *Bichromate* remain in poor demand, at unchanged prices.

**SOY.**—China still quoted 1s. 6d. per gallon in quantity.

**SULPHATE OF COPPER** is now tolerably firm at the reduced price of 17l. 10s. per ton.

**TURPENTINE**, through lack of business, is lower. American spirit, spot, 21s. to 21s. 3d.; February-April, 21s. 6d.; March-June, 22s.; May-August, 22s. 6d.; and September-December 23s. 6d. per cwt.

**VANILLOES.**—Of 352 tins offered in last public sales the large proportion of 263 tins sold, principally because holders showed a willingness to accept lower prices. The collection comprised all lengths, from 3½ to 8½ inches, in all sorts of condition. The finest and longest beans made 24s. 6d. per lb., while short mouldy qualities went as low as 2s. 6d. per lb.; intermediate sorts accordingly.

(FROM OUR AMERICAN CORRESPONDENT.)

NEW YORK, January 30.

During the month of January the demand increased, and fair volume of trade has been in progress in the home market, a hopeful feeling prevails with respect to the future, and already the speculative articles have all shown a tendency towards higher values. For export the demand has been light, but this was to be expected so soon after the turn of the year.

The following are the rates ruling for the principal export articles; the prices quoted in sterling in parentheses are the London equivalents of the rates prevailing here for freight, insurance, all market deductions, discounts, &c. being taken into account:—

**BALSAMS.**—Supplies of *Copaiba* have again begun to arrive on every steamer from the South, and as the market is already overstocked prices continue to decline. Para quoted 36c. (1s. 7½d.); Maracibo 34c. (1s. 6½d.); bright thick Maranhão alone appears scarce, but is quoted at the



low price of 38c. (1s. 8½d.). *anada* is unchanged. *To'u*.—Arrivals taking place more freely the price continues to drop; a large parcel just to hand is offered at 32c. (1s. 5½d.); this appears an extraordinary low figure.

**TONCA BEANS.**—*Angostura* are cheaper; the price ranges from \$1.05 to \$1.20 (4s. 7d. to 5s. 3d.) according to quality.

**CAMPHOR.**—Refined reached the lowest point during the middle of the month, but has at last taken a turn upwards; the price is still very low, viz., in cakes, 16½c. (9d.); in 4-oz. blocks, 17½c. (10d.).

**CUBEBS.**—Some holders claim that stocks on the spot being small, and no quantity to be expected from the East till August, present rates are altogether too low, and quote 70c. per lb. (17½.) for stemless berries, others are selling for forward delivery at 55c. per lb. (13½. 10s.), but in any case this market is much higher than London.

**GUARANA.**—There is very little to be had here, and is quoted \$3.50 (15s.).

**HONEY.**—Large supplies of Californian still come to hand, and the price has declined to 8c. lb. (39s. 6d. cwt.). The total quantity shipped from San Francisco this season has reached the enormous total of 19,000 cases, or about 1,500 tons, nearly half of this quantity being entered for Liverpool.

**OIL SASSAFRAS** is coming from the country in larger quantities, and can now be shipped at 45c. (2s. 1d.) in export packages.

**OIL WINTERGREEN** is without change, and continues neglected at the low price of \$19 (8s. 3d.).

**POTASSIUM BROMIDE.**—When the producers of bromine combined a short time ago to raise their price 2½d. per lb., the manufacturers of this salt did not at once make a corresponding advance in their quotation. They have, however, now done so, and quote 31c. lb. (1s. 4½d., 5 per cent.); most of them are over-sold.

**POTASSIUM IODIDE.**—Makers quote \$2.75 in bulk, or 11s. 5d. f.o.b. here net.

**ROOTS.**—*Serpentaria* is still very scarce, and price firm at 65c. (3s.). This high price has of course restricted the demand. *Ipecac.*—An importation of 82 serons was taken by one house here at 60c. (2s. 10d.); it has gone into consumption. *Sarsaparilla.*—The demand for Mexican for Hamburg has been very large, and there are not more than 100 bales left in store; for this 10½c. to 11c. (5½d. to 6d.) is asked; there is none reported on the way. Honduras is in large demand, especially the cheaper grades, and stocks of this kind are quite exhausted. There are 150 bales of best marks in store, held at from 45c. to 50c. (2s. 1d. to 2s. 3d.). *Senega.*—The demand for low grades has been good; prime is held firmly for 48c. (2s. 2d.).

**SPERMACETI** has advanced to 24c. (1s. 0½d.); makers find it as much as they can do to fill contract orders for Germany, and ask high rates for odd parcels; the price may go even higher.

**OIL PEPPERMINT.**—In last report the cablegram quoting \$3.50 lb. referred to the market price of H. G. Hotchkiss' brand; since then the market continued to advance, sales being made at \$3.60, \$3.75, \$3.90, and to-day the quotation has reached \$4: even at this high figure it is doubtful if any quantity could be obtained. \$4 is 16s. 6d., when to this is added freight, marine insurance, London dock charges, and market allowances (18s. 6d.) is reached, so that this market still continues ahead of London. This can hardly be a matter of surprise to holders of this oil there, for having secured nearly two-thirds of the entire crop from Wayne County, there are hardly enough supplies left here to meet the home consumption, and late sales on this market have not been for export. The stocks in producers' hands are quite exhausted, and no prospect of supplies can be looked for before next October. Any important movement that takes place now in this article will be in London, and it remains to be seen whether the speculators who hold the stocks there will be willing to realise at present rates, or hold for still higher figures.

**CARAWAY SEEDS** are rising rapidly. Prime Dutch is now worth 50s. to 52s. per cwt., nearly double the price at which it was sold this time last year. Messrs. Prashkauer & Co., of Savage Gardens, send us some remarks on these

seeds. They estimate the annual consumptive demand for caraway-seed in England at a total of 20,000 bales per annum. Distributed over the next five months—from now to the middle or end of June—the demand for caraway-seed in Great Britain must be set down at least as 8,000 bales. It has been ascertained that there are now no available stocks either in Russia, Sweden, or Germany, and in Holland there are only in all 2,000 bales of old seed, held over at great loss from four years ago, and 2,000 bales new seed in farmers' hands, mostly in very small lots. These 4,000 bales will have to meet our own demand as well as the requirements of any of the Continental countries and of the United States for the next five months. How this is to be accomplished it is very difficult to foretell. Statistics with regard to the acreage of this crop in Holland are, to our regret, not available; relying on estimates obtained from the best sources, an average crop in Holland would correspond to a total yield of about 50,000 to 60,000 bales. Owing to the extraordinarily low prices of this seed for several consecutive years, a considerable diminution of the acreage has taken place, so much so that the 1884 crop was estimated to yield only 35,000 bales; while the crop coming to maturity next year, having been based on the very lowest prices ever known, viz., barely 23s. per cwt. at the sowing time in the beginning of the year 1883 (the plant requires two years to come to maturity), is estimated according to the acreage provided for it, to yield only 25,000 bales. As it is undoubted that there will be no seed whatever left at the end of the season, it will certainly be an extraordinary problem to make these 25,000 bales, supplemented by proportionately small crops in Germany, Russia, and Sweden, furnish sufficient for the normal requirements of next year's trade all over the world. Caraway-seed is very extensively used in this country, as well as on the continent of Europe, in the United States, and those colonies which recruit their populations from Europe. Besides its well-known admixture in bread or cake, it forms a favourite condiment, and is one of the chief ingredients of the various preparations of cattle spice. It is also used largely for medicinal purposes and in the soap manufacture. In Germany the essential oil of the caraway-seed is extensively employed in flavouring liquors and as a scent. In the former capacity it forms one of the chief beverages of the population. The caraway plant has been the object of cultivation in this country, principally in the southern counties, from a very early period, and continued to be cultivated here down to the time when the comparatively heavy foreign duties on this, as on other kindred seeds, were abandoned. The price in normal years ranged between 30s. and 40s. per cwt. At present caraway-seed is cultivated to a large extent only in Holland, less extensively in Russia, Germany, and Sweden, and to a very small extent in Morocco. The seed from the latter country is of a very coarse quality, lacking entirely the delicious aroma of the European plant, especially of that grown in Holland. In Germany the cultivation used to be carried on in the districts of Magdeburg, Erfurt, and Halle, where it has been supplanted by beetroot for the sugar industry, and now only very small quantities of caraway-seed are grown there, while Germany draws the greater part of her requirements from Holland and Russia. In Holland the cultivation of caraway-seed forms one of the most valuable branches of its agriculture. The value of the acre of land in the respective country districts is not less than 800fl. (66½.), while as much as 80fl. (6½. 13s. 4d.) is sometimes paid in rent per acre, the average being 60fl. (5½.). The wages for agricultural labour are not much below those in England, the average being 1½fl. (2s. 6d.) per day. The average yield of caraway-seed is 12 to 16 cwt. per acre. In some parts it is sown together with mustard, in others with beans or peas, so as to obtain a crop of the other grain the first year, before the caraway plant has become developed. Caraway-seed can be grown on strong soil, and with liberal treatment for two and more consecutive years, without in any way impairing the yield of the crops. When we reflect on the persistence with which the overproduction of wheat, sugar, and other commodities has been carried on for years and years, ending in an unparalleled downfall of values, and returning a bare living to a number of cultivators, we cannot but wonder that comparatively valuable crops like caraway-seed and many others have been entirely neglected, so that only extreme values, as those now setting in, will be able to re-awaken interest for them.



# Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

## CHEMICALS.

ACIDS—		Last Month		This Month	
		s. d.	s. d.	s. d.	s. d.
Acetic	per lb.	0 2½	0 0	0 2½	0 0
pure	"	0 5	0 9	0 5	0 9
glacial	"	0 6	1 0	0 6	1 0
Benzoic Sublimate	"	0 0	3 6	0 0	3 6
Ex Gum	per oz.	0 6½	0 0	0 6½	0 0
Citric	"	1 4½	0 0	1 4½	0 0
Galic	"	3 2	3 6	3 2	3 6
Hydrochloric	per cwt.	4 6	7 6	4 6	7 6
Nitric	per lb.	0 3	0 3½	0 3	0 3½
Oxalic	"	0 6	0 0	0 6	0 0
Sulphuric	"	0 0½	0 1	0 0½	0 1
Salicylic	"	6 9	9 6	6 9	9 6
Tannic	"	1 4	2 9	1 4	2 9
Tartaric, English	"	1 8	0 0	1 8	0 0
foreign	"	1 7½	0 0	1 7½	0 0
ANTIMONY, crude	per cwt.	22	0 0	22	0 0
star	"	41	0 43	40	0 41
ARSENIC, lump	"	22	0 24	22	0 24
powder	"	12	6 12	12	6 12
BRIMSTONE, rough	"	8	0 8	8	0 8
roll	"	8	9 9	8	9 9
flour	"	10	0 12	10	0 12
GLYCERINE, German	"	50	0 52	50	0 52
refined	"	37	6 42	37	6 42
crude brown	"	17	0 0	17	0 0
IODIFORM	per lb.	0 8½	0 0	0 8½	0 0
IODINE, dry	per oz.	1	0 0	1	0 0
resublimed	"	0 10	1 4	0 10	1 4
MAGNESIA, calcined	per lb.	5	0 0	5	0 0
Hwds.	"	13½	0 135	13½	0 135
MERCURY	per bot.	3	0 0	3	0 0
PRECIPITATE, red	per lb.	2	11 0	2	11 0
white	"	1	8 2	1	8 2
PRUSSIAN BLUE	"	11	6 0	11	6 0
SANTONINE	"	10	0 0	10	0 0
SALICINE	"	35	0 0	35	0 0
THYMOL	"	117	6 0	117	6 0
SALT—	"	125	0 0	125	0 0
Alum	per ton	0 5	0 5½	0 5	0 5½
Ammonia:	"	560	0 600	560	0 600
Carbonate	per lb.	280	0 295	280	0 295
Hydrochlorate,	"	83	0 96	83	0 96
crude, white	per cwt.	70	0 90	70	0 90
Sulphate	"	38	0 42	38	0 42
Argol, Cape	"	8	0 0	8	0 0
Red	"	40	0 42	40	0 42
Oporto, red	"	2	6 0	2	6 0
Bleaching powder	per lb.	4	5 7	4	5 7
Forax, British refined	"	5	6 6	5	6 6
Calomel	"	17	6 18	17	6 18
Chloral hydrate	"	45	0 55	45	0 55
Liebreich's	"	2	2 0	2	2 0
Copper:	"	128	0 0	127	6 0
Sulphate	per cwt.	109	0 0	109	0 0
Copperas, green	"	3	6 5	3	6 5
Corrosive Sublimate	per lb.	3	6 5	3	6 5
Cream Tartar, French	per cwt.	40	0 0	40	0 0
brown	"	72	0 0	72	0 0
Epsom Salts	"	6	0 6	6	0 6
Glauber Salts	"	2	3 2	2	3 2
Magnesia: Carbonate	"	0	3½	0	3½
Pond, Hwds.	"	29	0 0	29	0 0
Morpbia Murias	"	46	0 46	46	0 46
Phosphorus	per lb.	0	6 0	0	6 0
Potash:	"	0	10 0	0	10 0
Bichromate	"	1	11 2	1	11 2
Carbonate:	"	10	6 11	10	6 11
Potasbes, Canada,	"	10	6 11	10	6 11
1st sort	per cwt.	29	0 0	29	0 0
Pearlshes, Canada,	"	46	0 46	46	0 46
1st sort	"	0	6 0	0	6 0
Chlorate	per lb.	0	10 0	0	10 0
Prussiate	"	1	11 2	1	11 2
red	"	10	6 11	10	6 11
Sulphate	per cwt.	10	6 11	10	6 11
Potassium:	"	1	8 0	1	5 1
Bromide	per lb.	9	0 0	9	0 0
Chloride	per cwt.	12	0 0	12	0 0
Iodide	per lb.	12	0 0	12	0 0
Quinine:	"	4	8 0	4	8 0
Sulphate, British, in	per oz.	4	6 0	4	6 0
bottles	"	4	1 0	4	1 0
Sulphate, French	"	4	0 8	4	0 8
Sulphate, German	"	40	0 42	40	0 42
Sal Acetos	per lb.	16	3 16	16	3 16
Sal Ammoniac, British	per cwt.	16	3 16	16	3 16
Saltpetre:	"	16	3 16	16	3 16
Bengal, 6 per cent. or	"	16	3 16	16	3 16
under	"	16	3 16	16	3 16

## Saltpetre:—(cont.)

		Last Month'	This Month
		s. d.	s. d.
Bengal, over 6 per	per cwt.	16 0 to 0 0	16 0 to 0 0
cent.	"	22 0 23 0	22 0 23 0
British, refined	"	7 9 8 0	7 9 8 0
Soda: Bicarbonate	"	45 0 0 0	45 0 0 0
Hwds.	"	0 13 0 0	0 13 0 0
Carbonate:	"	2 9 0 0	2 10 0 0
Soda Ash	per deg.	8 9 9 0	8 9 9 0
Soda Crystals	per cwt.	8 0 8 6	8 0 8 6
Caustic	"	11 3 0 0	11 3 0 0
Hyposulphite	"	12 0 14 0	12 0 14 0
Nitrate	"	30 0 34 0	30 0 34 0
Zinc Sulphate	"	26 6 0 0	26 6 0 0
SUGAR OF LEAD, White	"	0 9½ 1 0	0 9½ 1 0
Brown	"	2 3 0 0	2 3 0 0
VERDIGRIS	per lb.	2 4 0 0	2 4 0 0
VERMILION, English	"	60 0 80 0	60 0 80 0
China	"	60 0 150 0	60 0 150 0

## DRUGS.

		Last Month'	This Month
		s. d.	s. d.
ALOES, Hepatic	per cwt.	60 0 80 0	60 0 80 0
Scootrine	"	33 0 36 0	33 0 36 0
Cape, good	"	25 0 32 0	25 0 32 0
Inferior	"	40 0 120 0	40 0 120 0
Barbados	"	25 0 55 0	25 0 55 0
Curacao	"	60 0 80 0	60 0 80 0
AMBERGRIS, grey	per oz.	1 10 2 0	1 10 2 0
BALSAM—	"	1 7 1 8	1 7 1 8
Canada	per lb.	6 6 7 0	6 6 7 0
Capivi	"	1 10 0 0	1 10 0 0
Peru	"	25 0 27 6	25 0 27 6
Tolu	"	40 0 45 0	40 0 45 0
BARBS—	"	0 9 1 8	0 9 1 8
Canella alba	per cwt.	0 6 2 0	0 6 2 0
Cascarilla	"	0 10 3 0	0 10 3 0
CINCHONA—	"	0 4 1 3	0 4 1 3
Peru, grey	per lb.	0 6 1 9	0 6 1 9
Calisaya, flat	"	0 3 1 4	0 3 1 4
quill	"	0 7 2 0	0 7 2 0
Carthagen	"	0 4 1 5	0 4 1 5
Columbian	"	1 6 7 0	1 6 7 0
Cupres	"	0 6 2 3	0 6 2 3
New Granada	"	0 4 2 3	0 4 2 3
Pitayo & Maracaibo	"	0 2 1 0	0 2 1 0
Red	"	55 0 52 0	55 0 52 0
East India, crown	"	57 0 0 0	57 0 0 0
red	"	0 10 0 0	0 10 0 0
BUCHU LEAVES	"	0 11 0 0	0 11 0 0
CAMPHOR, China	per cwt.	2 6 3 0	2 6 3 0
Japan	"	6 6 7 0	6 6 7 0
Refin. Eug.	per lb.	40 0 42 0	40 0 42 0
Tablets	"	25 0 38 0	25 0 38 0
CANTHARIDES, China	"	0 3 0 0	0 3 0 0
Russian	"	70 0 240 0	70 0 240 0
CAMOMILE FLOWERS	per cwt.	0 6½ 0 10	0 6½ 0 10
CASTOREUM	per lb.	95 0 100 0	95 0 100 0
CHIRETTA	"	20 0 30 0	20 0 30 0
DIAGON'S BLOOD, Ip.	"	3 0 5 0	3 0 5 0
ERGOT OF RYE	"	5 0 6 6	5 0 6 6
FRUITS & SEEDS (see also Seeds and Spices)	"	3 0 4 0	3 0 4 0
Anise, China Star	per cwt.	3 0 4 6	3 0 4 6
Russian	"	1 6 3 6	1 6 3 6
Beans, Tonquin	per lb.	2 0 2 10	2 0 2 10
Cardamoms, Malabar,	"	3 6 6 0	3 6 6 0
good	"	11 0 13 0	11 0 13 0
inferior	"	0 10 1 3	0 10 1 3
Aleppy	per cwt.	200 0 230 0	250 0 260 0
Madras	"	30 0 34 0	30 0 34 0
Ceylon	"	10 0 12 0	10 0 12 0
Malabar sorts	"	8 6 11 0	8 6 11 0
Cocculus Indicus	per cwt.	7 6 10 0	7 6 10 0
Colocyth, apple	per lb.	8 0 12 0	8 0 12 0
Cubebs	"	18 0 20 0	18 0 20 0
Cumin	"	8 0 12 0	8 0 12 0
Fennigreek	"	18 0 20 0	18 0 20 0
Juniper Berries	"	60 0 90 0	60 0 90 0
Nux Vomica	"	95 0 0 0	95 0 0 0
Tamarinds, E. India	"	25 0 50 0	25 0 50 0
W. India	"	26 0 38 6	26 0 38 6
Vanilla, large	per lb.	2 6 3 6	3 0 4 6
inferior	"	2 0 4 3	2 0 4 3
FLOWERS—Dalmatian	"	1 6 4 10	1 6 4 10
Caucasian	"	1 0 3 11	1 0 3 11
HONEY, Chili	per cwt.	2 9 3 10	2 9 3 10
Jamaica	"	7 0 10 0	7 0 10 0
IPECACUANHA	per lb.	2 2 2 4	2 2 2 4
ISINGLASS, Brazil,	"	0 7 0 9	0 7 0 9
Tongue sort	"	0 6 0 7	0 6 0 7
East India	"	0 0 0 0	0 0 0 0
West India	"	1 6 0 0	1 6 0 0
Russ. leaf	"	55 0 100 0	55 0 100 0
Simovia	"	12 0 20 0	12 0 20 0
JALAP, good	per lb.	4 6 5 0	4 6 5 0
infer. and stems	"	66 0 73 0	66 0 73 0
LEMON JUICE	per deg.	45 0 80 0	45 0 80 0
LIME JUICE	per gall.	29 0 35 0	29 0 35 0
Liquorice, Spanish	per cwt.	1 3 1 5	1 3 1 5
Liquorice Root	"	0 4 0 0	0 4 0 0
MANNA, flaky	per lb.	0 3½ 0 3½	0 3½ 0 3½
Musk, Tonquin pod.	per oz.	3 0 6 0	3 0 6 0
Grain	"	1 3 1 5	1 3 1 5
Yunan pod.	"	0 4 0 0	0 4 0 0
OILS (see also separate list)	"	0 3½ 0 3½	0 3½ 0 3½
Almond, expressed	per lb.	3 0 6 0	3 0 6 0
Castor, 1st pale	"	1 3 1 5	1 3 1 5
second	"	0 4 0 0	0 4 0 0
Cod-liver	per gall.	0 3½ 0 3½	0 3½ 0 3½



		Last Month				This Month			
		£	s.	d.	£	s.	d.	£	s.
<b>Essential Oils:</b>									
Almond	per lb.	30	0	0	30	0	0	0	0
Anise-seed, star	"	6	7	6	6	7	6	8	
" German, &c.	"	8	0	13	8	0	13	0	
Bergamot	"	5	6	6	5	6	6	0	
Cajeput	per bot.	3	3	0	3	3	0	0	
Caraway	per lb.	5	6	0	7	6	11	0	
Cassia	"	3	9	4	3	9	4	0	
Cinnamon	per oz.	1	9	2	1	9	2	6	
Cinnamon-leaf	"	0	23	0	0	23	0	0	
Citronelle	"	0	12	0	0	12	0	2	
Clove	per lb.	3	3	3	3	3	3	6	
Juniper	"	1	6	2	1	6	2	0	
Lavender, Exotic	"	6	9	8	6	9	8	6	
" Mitcham	"	60	0	0	60	0	0	0	
Lemon	"	4	0	5	4	0	5	6	
Lemongrass	per oz.	0	1	2	0	1	2	0	
Neroli	"	7	0	0	7	0	0	0	
Nutmeg	"	0	8	0	0	8	0	0	
Orange	per lb.	8	0	10	8	0	10	0	
Otto of Roses	per oz.	15	0	34	15	0	34	0	
Patchouli	"	1	4	2	1	4	2	0	
<b>Peppermint:</b>									
American	per lb.	12	0	0	13	0	0	0	
(H. G. Hotchkiss)	"	15	6	16	17	0	0	0	
English	"	27	6	30	27	6	30	0	
German	"	8	0	14	8	0	14	0	
Japan	"	12	6	9	13	0	15	6	
Menthol crystals	"	38	0	40	35	0	40	0	
Rosmary	"	2	6	3	2	6	3	9	
Sassafras	"	2	6	0	2	6	0	0	
Spearmint	"	12	0	14	12	0	14	0	
Thyme	"	2	6	0	2	6	0	0	
Mace, expressed	per oz.	0	2	0	0	2	0	0	
Opium, Turkey	per lb.	15	0	17	15	0	17	0	
" Inferior	"	11	0	13	11	0	13	0	
QUASSIA (bitter wood)	per ton	60	0	80	60	0	80	0	
RHUBARB, China, good	"	1	6	3	1	6	3	0	
and fine	per lb.	1	1	1	1	1	1	3	
Middling to fair	"	1	1	1	1	1	1	3	
<b>ROOTS—</b>									
Calumba	per cwt.	22	0	30	22	0	30	0	
China	"	20	0	0	20	0	0	0	
Cus-Cus	"	30	0	21	30	0	21	0	
Galangal	"	21	6	0	21	6	0	0	
Gentian	"	22	6	25	22	6	25	0	
Orris	"	23	0	50	23	0	50	0	
Pellitory	"	68	0	80	68	0	80	0	
Pink	per lb.	1	6	0	1	6	0	0	
Rhatany	"	0	5	0	0	5	0	6	
Seneka	"	2	4	2	2	4	2	6	
Snake	"	1	6	0	1	6	0	0	
SAFFRON, Valencia	"	25	0	32	25	0	32	0	
Alicante	"	20	0	23	20	0	23	0	
SARSAPARILLA, Lima	"	0	6	1	0	6	1	0	
Guayaquil	"	1	2	1	1	2	1	5	
Honduras	"	1	0	1	1	0	1	3	
Jamaica	"	1	6	1	1	6	1	10	
SASSAFRAS	per cwt.	0	0	0	0	0	0	0	
SCAMMONY, Virgin	per lb.	32	0	35	32	0	35	0	
second and ordinary	"	15	0	28	15	0	28	0	
SENNA, Bombay	"	0	21	0	0	21	0	0	
Thunivelly	"	0	3	1	0	3	1	2	
Alexandria	"	0	9	1	0	9	1	6	
SPIRMACETI, refined	"	1	3	0	1	3	0	0	
American	"	0	10	0	0	10	0	0	
SOFTILS	"	0	1	0	0	1	0	2	
<b>GUMS.</b>									
AMMONIAC, drop	per cwt.	2	0	2	2	0	2	6	
ANIMI, fine washed	"	19	0	20	19	0	20	0	
sorts	"	13	0	17	13	0	17	10	
ARABIC, pale picked	"	2	15	3	2	15	3	10	
sorts, mid. to fine	"	1	10	2	1	10	2	6	
TURKEY, pick. gal. to fin.	"	7	0	8	7	0	8	10	
second & inferior	"	6	10	8	6	10	8	10	
sorts	"	4	17	5	4	17	5	10	
ASAFOETIDA, cm. to fin.	"	1	15	3	1	15	3	2	
BENJAMIN, Siam, 1st	"	12	0	30	12	0	30	0	
& 2nd	"	5	0	10	5	0	10	0	
Sumatra	"	5	0	10	5	0	10	0	
COPAL, Manila	"	15	0	67	15	0	67	0	
Angola, red	"	145	0	152	145	0	152	6	
DAMAR, pale	"	75	0	87	75	0	87	6	
EUPHORBIA	"	10	0	15	10	0	15	0	
GALBANUM	per lb.	0	3	0	0	3	0	10	
GAMBOGE, picked pipe	per cwt.	230	0	300	230	0	300	0	
GUALACUM	per lb.	0	6	2	0	6	2	1	
KINO	per cwt.	28	0	30	28	0	30	0	
KOWRIE, sorts	"	30	0	50	30	0	50	0	
selected	"	115	0	260	115	0	260	0	
MASTIC, picked	per lb.	1	6	3	1	6	3	3	
MYRRH, good and fine	per cwt.	100	0	150	100	0	150	0	
ordinary to fair	"	80	0	140	80	0	140	0	
OLIBANUM, p. drop	"	38	0	45	38	0	45	0	
amber and yellow	"	29	0	37	29	0	37	0	
SENEGAL	"	40	0	45	40	0	45	0	
SANDARAC	"	60	0	112	60	0	112	6	
SHELLAC, Orange	"	63	0	82	63	0	82	0	
LIVER	"	61	0	64	61	0	64	0	
THUS	"	25	0	0	25	0	0	0	
TRAGACANTH, leaf	"	120	0	180	120	0	180	0	
in sorts	"	20	0	180	20	0	180	0	
<b>OILS.</b>									
SEAL pale	per tun	27	10	28	27	10	28	10	

## Oils:—(cont.)

		Last Month				This Month			
		£	s.	d.	£	s.	d.	£	s.
SEAL, yellow to tinged..	per tun	24	0	27	24	0	27	0	
brown	"	23	10	24	23	10	24	0	
SPERM	"	55	0	56	55	0	56	0	
Cod	"	32	0	35	32	0	35	0	
WHALE, South Sea, pale	"	23	0	25	23	0	25	0	
yellow	"	22	0	23	22	0	23	0	
brown	"	20	0	21	20	0	21	0	
Sardine	"	25	0	27	25	0	27	0	
OLIVE, Seville	per ton	41	0	42	41	0	42	0	
Gioja	"	36	0	37	36	0	37	0	
Levant	"	41	0	41	41	0	41	10	
Mogador	"	35	10	36	35	10	36	0	
Spanish	"	41	0	42	41	0	42	0	
Sicily	"	41	0	0	41	0	0	0	
COCOANUT, Coch	"	32	10	0	32	10	0	0	
Ceylon	"	29	0	30	29	0	30	0	
Mauritius	"	0	0	0	0	0	0	0	
PALM, fine	"	32	0	0	32	0	0	0	
LINSEED	"	20	5	20	20	5	20	12	
RAPESEED, English, pale	"	28	0	0	28	0	0	0	
brown	"	26	0	0	26	0	0	0	
COTTONSEED	"	25	0	26	25	0	26	0	
LARD	"	41	0	43	41	0	43	0	
TALLOW	"	28	10	45	28	10	45	0	
TURPENTINE, American	per cwt.	23	0	23	23	0	23	3	
PETROLEUM, refined	per gall.	0	6	3	0	6	3	0	
Spirit	"	0	7	0	0	7	0	7	

## SEEDS.

		Last Month				This Month			
		£	s.	d.	£	s.	d.	£	s.
CANARY	per qr.	48	0	60	48	0	60	0	
CARAWAY, English	per cwt.	0	0	0	0	0	0	0	
German, &c.	"	18	0	26	18	0	26	0	
CORIANDER	"	10	0	21	10	0	21	0	
HEMP	per qr.	38	0	0	38	0	0	0	
LINSEED, English	"	0	0	0	0	0	0	0	
Black Sea & Azof	"	40	0	0	40	0	0	0	
Calcutta	"	42	6	0	42	6	0	0	
Bombay	"	45	0	0	45	0	0	0	
St. Petersburg	"	35	0	38	35	0	38	0	
MUSTARD, brown	per bush.	10	0	15	10	0	15	0	
white	"	7	6	9	7	6	9	6	
POPPY, East India	per qr.	39	0	0	39	0	0	0	

## SPICES.

CASSIA LIGNEA	per cwt.	27	6	28	0	27	0	0	0
Vera	"	18	0	23	0	18	0	23	0
Buds.	"	34	0	0	0	34	0	0	0
CINNAMON, Ceylon:									
1st quality	per lb.	0	9	2	1	0	9	2	1
2nd ditto	"	0	6	1	9	0	6	1	9
3rd ditto	"	0	5	1	2	0	5	1	2
Tellicherry	"	0	0	0	0	0	0	0	0
Chips	"	0	24	0	5	0	24	0	5
CLOVES, Penang	"	1	3	1	6	1	3	1	6
Amboyna	"	0	8	0	94	0	8	0	94
Zanzibar	"	0	5	0	54	0	5	0	54
GINGER, Jam, fine	per cwt.	90	0	0	0	80	0	0	0
Ord. to good	"	55	0	75	0	50	0	70	0
African	"	44	0	0	0	40	0	0	0
Bengal	"	35	0	40	0	30	0	35	0
Malabar	"	0	0	0	0	0	0	0	0
Cochin	"	48	0	115	0	40	0	90	0
PEPPER, Black, Malabar	per lb.	0	83	0	8	0	83	0	8
Singapore	"	0	8	0	0	0	8	0	0
White	"	0	10	0	108	0	10	0	108
Cayenne	"	0	94	1	24	0	94	1	24
MACE, 1st quality	"	1	4	2	0	1	4	2	0
2nd and inferior	"	1	1	1	2	1	1	1	2
NUTMEGS, 78 to 60 to lb.	"	2	6	3	5	2	6	3	5
90 80	"	2	3	2	5	2	3	2	5
132 95	"	1	7	2	3	1	7	2	3
PIMENTA	"	0	14	0	2	0	14	0	2





### Provincial Names of Drugs and Medicines.

To the Chemist and Druggist—

SIR,—I am glad you ask for notes on this very interesting subject, and beg to submit the following:—

Referring to the notes you printed last month, I think Mr. Delf is right in saying "balsam of life" is dec. aloes co.; Rennie gives that synonym. He also gives "Commander's balsam" (not "commodore's") for tinct. benzoin co. By "salts of steel" in this neighbourhood ferri carb. is understood; "oil of swallows" is ol. sambuci; and "oil of brick," olive oil, in which, when hot, powdered bricks have been digested. I know at least one establishment in the East of London where this oil was prepared as late as 1865!

"Diagrydium" is a mixture of scammony and snecens cydonie. [Formula wanted. Has the writer ever sold it.—Ed. C. & D.]

"Oil of Aaron" is possibly oil of arum (wake robin). It is sometimes asked for. Culpepper says, "dropped into the ears it easeth pains in them." It is supposed also to have many other and more recondite uses.

"Vitriolated tartar" is potasse sulphas (also known as "vitriolated kali").

I will now give from memory a list of provincial names I have myself met with here and elsewhere. The meanings of some of them are unknown to me, but others of your readers may be able to explain them:—

"Ceny" is, of course, senna. This word, so spelt, occurs in the second fol. edition of Macbeth—"Whit rhubarb, ceny, or what purgative drug?" Later, editors have spelt it "cyme," with a note of interrogation!

Uction .. .. .	Ung. hyd. mit.
Quintum .. .. .	Cer. simplex
Line seed .. .. .	Linseed

(Line is a very old name for the linseed plant, and was applied also anciently to fabrics spun from flax.)

Tincture of life .. .. .	A tincture of origanum and rosemary [Formula wanted.—Ed. C. & D.]
Nanguail salve .. .. .	Cer. resin. nig.
(A nanguail is a corn, from the Anglo-Saxon <i>angneagl</i> .)	
Sal-ammoniac .. .. .	Liq. ammon.
Red lavender (powder) .. .. .	Red sandal wood
Dyer's cordial .. .. .	Diaseordium
Spirit of vitriol .. .. .	Acid. sulph. dil.
Oil of blues .. .. .	(?)
Oil of man .. .. .	(? Aniseed). [No. Originally a preparation from deadmen's bones.—Ed. C. & D.]

Redtrified (rectified) weratin .. .. .	(?)
Oil of whit .. .. .	(? White oils)

The following are evidently mere mistakes in pronunciation, but they are sufficiently amusing:—

Billy Crawshaw's pills .. .. .	Pil. coeciae
Sance of gorilla .. .. .	Sarsaparilla
Roman Catholic camphor .. .. .	Homoeopathic camphor
Queen Anne's orange wine .. .. .	Orange quinine wine

But perhaps the most lamentable mistake is that of a chemist's assistant, who applied some short time since for the new patent, Gell's Semium, for toothache!

Epworth, January 27.

I am, &c.,  
C. C. BELL.

To the Chemist and Druggist—

SIR,—I notice with pleasure a column devoted in THE CHEMIST AND DRUGGIST to the Provincial Names of Drugs and Medicine, and trust that it will receive the support and contributions of a large number of our provincial brethren.

The following are some of the most unusual names I have met with.

Steel fat .. .. .	Ung. hyd. mit.
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Called "steel fat" on account of being used to prevent steel from rusting.

Crow fig .. .. .	Nux vomica
Stone mercury .. .. .	Hyd. bichlor.

I see you wanted to know what was used for "oil of swallows;" oleum viride is generally used.

In the absence of any official substitute for "oil of worms," I give the

following formula, found in a pharmaceutical work, written by John Quincy M.D., published in the year 1749:—

Oil of earth-worms = oleum lumbricorum.—

Take of—

Earth-worms, well washed .. .. .	½ lb.
Ripe olive oil .. .. .	2 pints
White wine .. .. .	½ pint

Boil them together in balneo till the wine is evaporated, press out the oil, afterwards strain it for use.

If it is found absolutely necessary to make ol. vermium var. (?) I would suggest that it be made at some distance from the residences of members of the Society for the Prevention of Cruelty to Animals, as their olfactory nerves are rather sensitive, and they might not look upon the matter from a scientific point of view.

A formula is also wanted for oil of Exeter. I give it on the same authority:—

Take of wormwood, the lesser centaury, eupatorium, fennel, bays, hyssop, marjoram, savin, sage, and thyme, of each 4 oz.
Of southernwood, betony, ground pine, and lavender, of each 6 oz.
Of rosemary, 1 lb.; camomile, broom flowers, cumine, and fennel Greek seeds, black and white hellebore root, and lemon peel, of each 4 oz.
Of euphorbium, mustard, castor, and pellitory, of each 1 oz.; of oil, 16 lbs.; of wine, 3 lbs.

*Modus operandi.*—Let the herbs, flowers, and seeds be bruised, the roots, peels, and castor be sliced and macerated together twelve hours, with a bath-heat, with the wine and oil, then, after a gentle boiling, after the wine is all consumed by evaporation let the oil be drained out and kept for use.

It seems hardly possible to get a substitute for a preparation like this; nevertheless, I have seen oleum viride substituted for it.

This statement that these formulæ are taken from a medical work may be discredited by some practical men, but it is, nevertheless, true, and tends to show that pharmacy in the last century, although not quite so "elegant" as now, was at least a very complicated affair.

I am, dear sir, yours truly,

Guilford, January 27.

A. C. S.

#### SYNONYMS.

Oil of swallows .. .. .	Ol. samb. vir.
Oil of spike .. .. .	Ol. samb. vir.
Oil of salt .. .. .	The strong liquor from salt-works
Rising salts .. .. .	Ammon. carb.
Doctor .. .. .	Ammon. carb.
Dutch drops (in small quantities) .. .. .	Tinct. benz. co.
White mercury .. .. .	Hydr. ammon.

North Shields.

28, 249.

"Oil of bricks."—Linseed oil, slightly coloured with alkanet root, is used here.

"Oil of swallows."—Ol. sambuci viride.

"Oil of worms."—I have seen this article, which was truly, as named, earth-worms simmered in linseed oil; probably linseed oil will now be used.

"All fours."—Another composition:—

	Parts
Ginger .. .. .	1
Senna .. .. .	2
Juniper berries .. .. .	2
Epsom salts .. .. .	4

With a little Spanish juice to sweeten.

Church, January 27.

28, 248.

A chemist at York (40/248) kindly sends us the following:—

For "baume de vie," "balm of life," "liquid bitter alloways," "liquid hiera piera," I have sold dec. aloes co.; for "tincture of Benjamin," "Dyer's cordial," "balm drops," "friar's balsam," I have sold tinct. benzoin co.; for "oil of swallows," "green oils," I sell ol. sambuci viride.

A friend who is a retired chemist informs me that forty years ago what was sold in Leeds as "oil of Peter" was the liquor collected from pearls after being exposed to the air; this liquor, being strongly alkaline, saponified with any oil it might be mixed with, which is the reason it occurs in recipes for white oils. He also says—which to my idea seems rather absurd—that oil of brick is made by macerating powdered brick with sweet oil, the oil dissolving something real or imaginary from the brick. It is sold extensively at Chesterfield. I have been asked for "syrup of foxes' lings," "syrup of maidenhair," and shall be glad to know what ought to be sold for those preparations.

A blacksmith asked me for "potash for hardening iron." I discovered that he wanted "potass. pruss. flav.



Mr. Walter F. Noak, Bromsgrove, sends the following list used in his part of Worcestershire:—

NAME	ARTICLE SOLD
Trooper's ointment .. .. .	Ung. hydr. mit.
Blue butter .. .. .	"
Child's ointment .. .. .	"
Oil of russit .. .. .	"
Blue unction .. .. .	"
White gwintum .. .. .	Ung. zinci.
Yellow moselikin .. .. .	Ung. resine.
Dial thay .. .. .	Ung. althae.
Syrup of maidenhair .. .. .	Syr. papav. alb.
Dragon's blood .. .. .	Tr. lavand. co.
Gum dragon .. .. .	Gum tragac.
Brown domiueu .. .. .	Empl. galbani.
Crowfig .. .. .	Nux. vom.
Hungary water .. .. .	Spt. rosmari.
Indian pink .. .. .	Rad. spigelia.
Turpeth mineral, or turps a mineral	Hydr. sulph. flav.
Verjuice .. .. .	Acetum dest.
Bitter apple .. .. .	Pulv. coloc. pulp.
Salts of wormwood .. .. .	Potassae carb.
Red iodine .. .. .	Hydr. iod. rub.
White copperas .. .. .	Zinci sulph.
White vitriol .. .. .	"

Messrs. Spencer & Vernon (Birmingham) send us the following:—

Mercury stone .. .. .	Hydrarg. perchlor.
Saturn's drops .. .. .	} Liq. plumbi acetatis
Extract of lead .. .. .	
Goulard's extract .. .. .	} Liq. antim. mur.
Butter of antimony .. .. .	
Liquid dragons' blood .. .. .	Tinct. lavand. co.
Hungary water .. .. .	Sp. rosmarina
Proprietary drops .. .. .	} Tinct. aloes co. P. L. vel
Elixir proprietatis .. .. .	
Essence of potato drops .. .. .	} Tinct. uyrhæ comp.
Surfeit water .. .. .	
Gum dragon .. .. .	Liq. ammon. acet.
Rust of iron .. .. .	Gum tragacanth
White copperas .. .. .	Ferri subcarb.
Green copperas .. .. .	Zinci sulphas
Diathay .. .. .	Ferri sulphas
Blue-stone .. .. .	Ung. althae.
Raddle .. .. .	Cupri sulph.
White wine vinegar .. .. .	Venetian red
Salts of wormwood .. .. .	Acid acetic dil.
Salts of sorrell .. .. .	Potassae carb.
Salts of lemon .. .. .	} Potassae binoxalas

Newport, Salop.

To the Chemist and Druggist—

Oil of spike .. .. .	Ol. lavand. spic.
Syrup of maidenhair .. .. .	Syrupus adianti capill.
A form in Beasley's "Formulary."	

I endeavour to supply the genuine of these old things when possible:—

Green oil .. .. .	Ol. sambuci
Oil of elder .. .. .	"
" camomile .. .. .	"
" swallows .. .. .	"
" wormwood .. .. .	"
Blue ointment .. .. .	Ung. hyd. mit.
Uction .. .. .	"
Trooper's ointment .. .. .	"
Child's ointment .. .. .	"

There are three old recipes in my prescription book that I have many times made up.

Tincture of steel .. .. .	Tinct. aloes comp. P. L.
Elixir proprietatis .. .. .	"
Niter .. .. .	Ferri oxidum.
Ginger .. .. .	"
Golcothar .. .. .	"

Oil of wormwood.  
Spt. of turpentine.  
Corrosive sublimate, &c.

In this oil, absinthii ver. was required.

If I may venture an opinion, your collection may be of archaeological interest, but will not much benefit the pharmacist of the future. In my experience I find these old names fast becoming obsolete. Oxyriocla

paracelsus and Brown domiun made a once popular plaster, but have now had a long repose in the plaster drawer. Customers will now ask for a Belladonna plaster for the back, &c., showing education is doing its work, and combined with medical information contained in papers, almanacks, &c., we shall in the future have but little practical occasion to make use of these synonymus. T. W. PICKEN.

[We are much obliged to our correspondents for their communications, and trust others will follow their example. We would again call their attention to the fact that the names we want are those in actual use to a greater or less extent. Mere book synonymus and ignorant mistakes are of little value. The quotations of the formulæ from Quincy are interesting. The third edition of his book was printed in 1720, the twelfth in 1742, the fourteenth in 1769; so we presume the edition quoted from is the thirteenth. Can any reader supply earlier information about oil of Exeter, and give chapter and verse for the origin of the name? We would ask our correspondents to give the correct titles of the works they quote from, with date of publication and page referred to.]

We add a few contributions:—

Syrup of foxes' lungs originally made from the lungs of the fox, which, according to the doctrine of signatures, were supposed to make the patient strong-lunged and long-winded. In Norwich a substitute is sold, made as follows:—

Liquorice .. .. .	2½ oz.
Vin. ipecac. .. .. .	5iv.
Sugar .. .. .	8 lbs.
Water .. .. .	3½ impl. pints

Dissolve the liquorice in the water, add the sugar, strain through flannel, and add the ipecacuanha wine.

Yorkshire Wash.—A mixture of 1½ oz. strong solution of ammonia, with 1½ pint of tap water. Used for cleansing fabrics. Norwich.]

### Chemists and Druggists' Trade Association.

To the Chemist and Druggist—

SIR,—In your Provincial Reports for last month appears the statement that "a gentleman connected with a well-known house in London said he found there were more unregistered men trading as legitimate chemists in Birmingham than could be found in London or any other large town in which he had been."

It is a very easy matter for *anonymous* persons to level a charge of this sweeping character against a town, and then proceed to base upon it a second charge of neglect of duty against an Association having its head-quarters there.

The Association with which I am connected has, at various times, successfully prosecuted six unregistered traders residing in Birmingham, and, if your correspondent will transmit to me particulars of any clear case of infringement of the Pharmacy Act, either here or elsewhere, with which the Association has power to deal, he may rest assured that the same shall have prompt attention, and that he will receive my best thanks. As to the insinuation that the Association is losing the support of registered men through its indifference to illegal trading, permit me, as far as Birmingham is concerned, to repudiate it. We have at the present time on our books 123 members residing in the town—as large a number as at any time since the formation of the Association in 1876, since which time five Birmingham chemists only have resigned their membership. The result would, I submit, sir, be very different had we ignored infringements of the Pharmacy Act "at our very doors."

In conclusion, I may once more point out that there exists a great deal of "unfair trading" from a trade point of view, which is not *illegal* trading under the Act of Parliament, and which neither this Association nor the Pharmaceutical Society has any power to suppress. Further, that cases of infringement of the Pharmacy Act are continually arising which can be successfully dealt with by the Pharmaceutical Society under the 15th section of the statute, but which this Association cannot interfere with.

I am, sir, yours faithfully,

W. F. HAYDON,  
Secretary to the Chemists and Druggists' Trade Association of Great Britain.

Offices of the Association,  
23 Burlington Chambers, New Street,  
Birmingham, February 11.

### The Year-book of Pharmacy.

To the Chemist and Druggist—

SIR,—I wish to draw attention to the list of members of the British Pharmaceutical as published in the "Year-book of Pharmacy," particularly with regard to the distinctive titles F.I.C., F.C.S., &c.

I ask, sir, does it not savour of the weakness of human nature that Major and Minor men, who mainly support the Conference, and who, with well-ratified qualifications, should be made subservient to such honorary distinctions as the above, their own well-earned titles being suppressed?

Yours, &c.,

C. H. SOUTHWELL, Ph. Chemist.



## A Chemist's Circular.

## To the Chemist and Druggist—

SIR,—The enclosed chemist's handbill, which is being extensively circulated in this town, deserves publicity, if there is room for it in THE CHEMIST AND DRUGGIST, as it will afford at least one reason why the efforts which are made to advance pharmacy meet with a cool response.

Merely requesting that you will withhold the name and address of the "gold metallist" who issues the handbill, as some other metallists may not like to see it,

Shrewsbury, January 23.

I remain, sir, yours truly,

WILLIAM GOWEN CROSS.

**IMPORTANT CAUTION.**—From the returns of the public analysts, it appears that once in four times, on an average, a prescription made up at a chemist's shop is not composed of pure drugs made in strict accordance with the Pharmacopœia. It is fair to note that many of the samples reported against appear not to be adulterated in the ordinary sense of the word, but are merely, from having been originally defective, or having deteriorated through keeping, below the standard strength. But this serious result occurs—that such drugs will fail to produce the effect that would have been produced by drugs of proper strength and quality.

"Messrs. —, the dispensing chymists, whilst deploring the above serious state of dispensing, can with pleasure and confidence state that not a single article has issued from their pharmacy but of the finest and purest quality.

"Every drug is obtained direct from the most eminent makers with the following guarantee on it:—'This preparation is guaranteed to answer the characters and tests of the British Pharmacopœia,' and on receipt is again subjected to the most crucial tests as to its purity, freshness, and strength.

"Messrs. — dispensing a great number of prescriptions daily, they are enabled to replenish their stock continually, which is a very important fact.

"The dispensing is under the sole management of Mr. — (Gold Metallist), A.R.P.S., L.A.S.A., London, who has had very large experience in the first provincial and London pharmacies."

## Pharmacy in Queensland.

## To the Chemist and Druggist—

SIR,—I am sending you by this post copy of debate on the Queensland Pharmacy Bill in both the Houses of Parliament here. You will see from same that we are not thought much of yet in some quarters. The Bill is drawn on the lines of the British Pharmacy Bill. The Upper House passed an amendment, making it compulsory that the first Board should consist of examined chemists and doctors; the Lower House have thrown out that part and passed the Bill, and I expect it will come before the Upper House again next week, when we hope to have it finally settled.

I promised you that I would let you know something of the life of a chemist in Queensland. I bought a business (Mr. Hains', who is in England) a fortnight after landing, and am glad to say that I have not been disappointed. The hours are very long—from 7 A.M. to 10 P.M., and open all day Sunday. Chemists who cannot keep an assistant have a heavy time of it. Good assistants are scarce; the bulk of those that arrive are worse than useless, being the cast-offs from England, &c. It is useless to send out here the "ne'er-do-wells" from older communities, as they nearly always get worse. Unless men are sober, industrious, honest, and not too particular about what they do, it is better to stay at home. Trade is quiet now, owing to the drought.

I hope to write you more fully shortly.

I am, faithfully yours,

T. W. THOMASON.

The South Brisbane Pharmacy, Stanley Street,  
November 5, 1884.

## The Chemists' Aerated and Mineral Waters Association (Limited).

## To the Chemist and Druggist—

SIR,—The Chemists' Aerated and Mineral Waters Association (Limited) advertise in your last issue, page 94, as follows:—"The only company that supplies exclusively to hospitals and chemists manufactured mineral waters of the highest class," &c. Would my brother chemists be surprised to know that one of the largest grocery stores in this town sell this company's waters, and that the said company have actually printed and placed on each bottle the designation by which these stores are known. I have also been through these premises, and in their cellars saw the cases with the mark outside. I was also apprised by one of the proprietors that they were shareholders in the company. What do your readers say to this? I may add that one of the bottles is in my possession, and shall be pleased to forward it for your inspection if any verification is necessary.

Yours faithfully,

Cardiff, February 4.

CHEMIST. (49/250.)

[We have made inquiries concerning the above, and are informed that

the grocers referred to, who are shareholders in the company, are not supplied direct from the Association. Obviously it is impossible for the Association to prevent any of those chemists whom they legitimately supply from reselling to anyone else, be they grocers or any other traders.—Ed. C. & D.]

## Dispensing Difficulties.

3223.—*Highlander* finds that his **Pil. Coloc. Co.** and **pil. coloc. c. hyos.**, and more rarely **pil. rhel. co.**, pit and crack after they have been made a few days. Coating makes them even more ungainly. He uses resin of scammony, and asks if that can have any effect. Yes, it is the cause, and if liquor potassæ be used instead of water to mass the **pil. coloc. co.**, pitting will be prevented. Instead of using 2 oz. of resin for the B.P. quantity use 12 drachms 24 grains, and 2 drachms 12 grains of liquorice powder. A scammony contains from 80 to 90 per cent. of resin this correction is necessary, and allows for 85 per cent. of resin. For the B.P. quantity of mass from 50 to 60 minims of this potash solution should be used, the smaller quantity the better. **Pil. coloc. c. hyos.** requires only the extract to mass it and with the above modification is not so apt to pit. The pills should be thoroughly dried before they are coated.

62251. *Learner*.—Whenever the signs 5, 3, or 1b are employed, you will be justified in using apothecaries' weight. See CHEMISTS' AND DRUGGISTS' Diary, 1885, page 125.

J. A. C.—Respecting the use, dose, and mode of administration of **Hydrochlorate of Cocaine**, we have given such full details in our preceding three numbers that we must refer you to them. **Sulphate of Esine** is used chiefly in the treatment of certain eye diseases. A few drops of a solution of 2 grains of the sulphate in 1 oz. of distilled water cause marked contraction of the pupil. This treatment is adopted in inflammation and neuralgic affections of the eyeball in strumous ophthalmia &c. For hypodermic injection a solution of salicylate of esine is recommended. Dose from  $\frac{1}{2}$  grain.

25068. *An Apprentice* wishes to know the best method of mixing the following:—Cod-liver oil, honey, glycerine, and lemon-juice, of each 1 oz. Mix the honey with the lemon-juice (in a mortar), and, when uniform, add the glycerine. Next, shake up the cod-liver oil in a 4-oz. bottle with five drops of tincture of quillia (or senega), and add it in small portions at a time to the contents of the mortar, incorporating each portion before the addition of another. The result is a good mixture, but not a perfect emulsion, because the watery portion separates in the course of a few hours, but remixes readily on shaking. A better result is got by the addition of tragacanth (10 grains mixed with the glycerine); but the first method serves the purpose sufficiently well.

2532. *G. W.*—**Concentrated Syrup of Tolu**.—A correspondent in 1882 told us that he had used the subjoined formula with satisfaction for some time:—

Balsam of tolu .. .. .	2 oz. troy
Rectified spirit .. .. .	2 oz. fluid
Dissolve with the aid of heat, strain, and pour into—	
Kaolin .. .. .	2 oz.
Water .. .. .	5 oz. fluid

Shake well and filter, and pour over the filter enough water to make the product measure 3vij. 5j. m45; 1 part of this mixed with 4 parts of thick simple syrup makes a syrup of tolu of British Pharmacopœia strength. This solution keeps well.

We suggest as a possible improvement that the kaolin might be mixed with the alcoholic solution before adding it to the water.

25250. *J. E. T.*—**Bleaching Catgut**.—This correspondent wants to know the proper bleaching agent. He has generally burned sulphur in a box in which the gut is exposed to the fumes. He has also tried bleaching by permanganate of potash and hydrochloric and oxalic acids. Some firms manage to turn out very white transparent strings.

We are unable to give a practical reply to this query. The production of the finest transparent strings seems to be an Italian speciality. In Naples alum is added to the alkaline lye used to wash the gut, and this helps to render it clear and white. But the quality varies with the nature of the intestines; if they are tolerably free from fat the better is the resulting gut. As far as we are aware, sulphurous acid gas is the only bleach used. In your other experiments you did not use sufficient oxalic acid when you used earthenware vessels. The action of the iron of the zinc vessels accounts for the greater reduction of permanganate in that case. Gut is generally kept in oiled bladder; so kept it remains clear, but becomes opaque otherwise.



49/247. *Candle Lamp.*—**Balsam of Sulphur** is an old compound of the London Pharmacopœia. It was last official in the P. L. 1824, when the formula was 16 oz. of olive oil heated in a sand-bath, and 2 oz. of washed sulphur gradually stirred in, and the whole boiled together until the mixture assumed the consistence of a thick balsam. Formerly the proportion of sulphur was double the above. We believe cheaper oils are now generally substituted for olive oil. **The Curriculum.**—The Pharmaceutical Council propose to give three years' notice of the changes in their regulations, so that even if all goes as well as even Mr. Schacht can desire, you will have plenty of time to get through under the present regulations.

### On the Road.

Mr. W. R. Fowler, of Portsea, sends us a statement showing the visits he had from travellers during 1884. Eighteen travellers for drug houses and 133 for sundries houses called during the year. Of these five of the former and nine of the latter category obtained orders. Among sundries are included patents, brushes, sponges, perfumery, mechanical goods, filters, printing, corks, bottles, aerated waters, &c. Mr. Fowler thinks the large increase in the proportion of representatives from sundries houses shows that the trade is getting more and more mixed.

### Electric Light.

*To the Chemist and Druggist.*

SIR,—Perhaps you could inform your numerous readers through your very valuable journal what would be the probable cost of laying down a small gas-engine for the production of the electric light for shop use, and also what might be the estimated cost of production, taking the price of gas at an average.

I am, &c.,

MORE LIGHT.

A nominal one-horse power "Otto" gas-engine (which is generally recognised as one of the best, though it is not the cheapest) costs about 100l. That would be sufficiently powerful to drive a dynamo capable of providing about a dozen 10-candle power electric lights. The dynamo might cost anything from 10l. to 50l. Second-hand ones are frequently to be obtained. The lamps and the rest of the installation could all be put up for about 5l. The engine would consume 60 to 70 cubic feet of gas per hour. We do not think it would pay any chemist to set up an engine for the purpose of producing the electric light, but those who already have engines on their premises for the manufacture of aerated waters or for other purposes might certainly investigate the cost of employing it with a dynamo for electric light. They might spare sufficient power to charge accumulators, and so not need to run the engine specially for the light. But in any such cases they will do well to consult a respectable electrical engineer. We believe that anyone who could spare, say, ½-horse power for a few hours a day could charge accumulators with sufficient electricity to furnish, say, six lights, as above, for the shop in the evening. The whole cost to establish the installation (excluding the engine) need not exceed 25l. or 30l., and the light will cost nothing. We can testify from experience in this office to the superior comfort of the electric light over gas.

23/250. *E. M. M. A.*—There is no Pharmacy Act in India or Ceylon. We have reported several attempts to get one passed, but these have not resulted successfully.

*Specs.*—Unqualified storekeepers may sell any patent medicine, poisonous or not, if they have patent-medicine licences. But they, and chemists also, are required to observe the regulations of the Pharmacy Act in regard to labelling, &c., if they sell a patent medicine containing poison.

61/251. *Caoutchouc.*—**Rubber Stamps.**—To make these the name or whatever is required is first set up in ordinary type and in the style required. A rim about ½ inch high is placed round the forme, and dentists' plaster made to proper consistence poured in and allowed to set. When this matrix is removed from the type a piece of vulcanised rubber about ½ inch to 1 inch thick is cut to the size of the plaster and laid upon it. Both are then placed in a suitable screw-press, and beat is applied so as to thoroughly soften the rubber. The screw is then turned down hard, and left so for a time until the impression is well set. The rubber is then cemented to a block of wood and the stamp is ready for use.

38/251. *H. C. B.* writes:—"As I am owner of a considerable garden which is going to waste, so to speak, I have thought of planting some medicinal herbs in it if it were in any way profitable. Can you help me in a selection or give me any information as to the most profitable crop?"

Our experience of gardening is that the most profitable use (in a pecuniary sense) to which a garden can be put is to do with it what you are doing now—that is, let it run to waste. Dr. Atfield a few years ago

fired a few imaginations with the idea of starting drug farms, but he gave no details as to the means of working at a profit. He only suggested experiments. At the last Pharmaceutical Conference Mr. Hasselby gave his experience of growing belladonna and henbane in his back garden (see *THE CHEMIST AND DRUGGIST*, August 15, 1884, or "Year-Book of Pharmacy," 1884, page 452), and at the same meeting Mr. Gerrard gave some information about the cultivation of these plants. But neither of these gentlemen were seeking direct profit, or, if they were, we judge they missed it. The only chance of making profit, it seems to us, on any but a very large scale would be to grow one plant (henbane or belladonna, for example) and make the extract from it. The labour and expense of drying the leaves for the market would swallow up any margin which raising them might leave. We publish this month some remarks about growing caraway seeds in this country, which might pay if present prices could be relied on for the next two years.

248/25. *Subscriber.*—The following is a good and reliable preparation for keeping the bands soft:—

Boracic acid	..	..	..	..	..	10 grains
Glycerine	..	..	..	..	..	1 oz.
Orange-flower water	..	..	..	..	..	½ "
Rose water	..	..	..	..	..	1½ "

Make a solution.

To be applied immediately after washing.

249/9. *Apprentice.*—**Hair Wash** for odorator:—

						Oz.
Acetic acid	..	..	..	..	..	1
Glycerine	..	..	..	..	..	2
Rectified spirit	..	..	..	..	..	2
French essence (Jockey Club or any other)	..	..	..	..	..	½
Water to	..	..	..	..	..	10

Mix the essence with the spirit and 3 oz. of water, and add 2 drachms of magnes. carb. levis.; shake occasionally during an hour, then filter and wash the magnesia with water to 7 oz.; with this mix the other ingredients, and colour with tr. croci.

You will find full information on pill-coating in this year's Diary, or reprinted in book form, price 1s. or 1s. 2d. post free, to subscribers only.

32/249. *Subscriber.*—**Hydrogen Flame Test.**—In order to avoid an explosion when you apply a light to the exit tube collect a few test tubefuls of the gas. When a tubeful burns without sound you have an indication that the hydrogen is pure, and can proceed to use the flame test.

**Temporary Fume cupboard.**—An empty castor-oil case will serve the purpose. Lute the seams with putty. Get two well-fitting doors fitted to the top of it, with a sliding glass pane in each. This forms the fume of the cupboard. At the back (right-hand top corner) get an L-shaped iron pipe inserted. This should be from 4 to 6 inches diameter, the horizontal portion 8 inches long, and the vertical 12 inches or more. By heating the angle with a spirit-lamp a draught is created. You have now got your cupboard. Where are you to place it? The fire-chimney is, of course, the best place, and you could modify the exit pipe, so that the cupboard could be placed as appears most suitable to yourself. If you have a back window which will admit of one of the panes being removed, so that a hole for the exit pipe may be got, that would be a better arrangement.

10/43. *W. S. H.*—**The Statute of Limitations** can only be pleaded in regard to debts incurred over six years previously. The six years are reckoned from the date of the invoice, irrespective of the date when the goods were delivered. An express acknowledgment of the debt in writing subsequent to the date of incurring it revives the claim as from the date of the acknowledgment.

249/71. *Pharm. Inquirer.*—(1) **Chlorodyne.**—Is there any fixed strength for chlorodyne supplied by the wholesale houses? Formule are numerous; no two give equal strength, and we expect that this condition of things will be reflected by the wholesale preparations. Squire, for instance, gives 8 grains muriate of morphia in about 32 fl. oz., while Martindale gives 40 grains in 10 fl. oz. On the other hand, Martindale gives 160 minims of dilute hydrocyanic acid in 10 fl. oz., while Squire orders 2 oz. Prussic acid, 2 per cent. in 32 fl. oz. The conclusion to be drawn from these varying opinions is, that it is not safe to trust to these substitutes at all. When chlorodyne is prescribed the proprietary article is almost invariably intended. (2) **Aqua Sambuci** and **Aqua Flor. Aurantii.**—Does the



fungoid growth in these alter them? Given sufficient time, the fungoid growth spoils these waters completely. They keep well if stood in a cool and dark place. (3) Recipes ordered by price.—Is it usual to charge extra for dispensing? The rule is to charge the retail prices only. If a customer thinks you have imposed upon him, he patronises another establishment. (4) **Trusses.**—The ordinary truss is the most generally useful. Next to that the serotal. Moe-Main not so suitable for workmen. (5) **Show-bottle Colours.**—Make up the full quantity, or more, and allow to deposit. Then decant. Filter, if required, through pyroxylin or glass-wool. (6) Surely when a medicine is recommended "for neuralgia" or "for indigestion" that is a recommendation which renders it liable to the medicine stamp duty. (7) No. 2 in your sketch is the percolator proper, and you use it correctly. Put sufficient water into No. 3 to allow No. 1 to dip into it. No. 1 is intended to prevent evaporation: the office *d* should remain corked during maceration, and when you begin to percolate remove the cork. When percolation ceases pour water through *d*, if you wish to displace the spirit which remains in the marc.

52/252. *A. B.*—You will find the preparation you want advertised in this Journal by Messrs. W. J. Bush & Co.

252/51. *W. D.*—**Sachet Powder.**—Formulae for heliotrope sachet will be found on page 24 of our volume for 1883; page 62, 1881; page 423, 1878; ess bouquet, page 248, 1881; white rose, violette, and thirteen others, page 423, 1878. We have never come across a stephanotis sachet powder.

13/45. *A. D.* wants to know what is the best book on leech-breeding?

[J. R. Johnson published a treatise on the medicinal leech, 148 pages, in London, 1816. An elaborate article on "The Propagation of Leeches," by M. L. Soubeiran, was translated in the *Pharmaceutical Journal*, first series, vol. x., page 469.]

And what is the best mode of levigating lump fuller's earth?

[Grind under an edge-runner, or in a mortar, with water; stir the paste in a large quantity of water, leave for a few minutes for the coarser particles to settle; pour off the supernatant liquid with the fine particles, and set aside till all has deposited, decant, dry, and re-powder. Repeat the process with the coarser particles if the quantity left is important.]

37/251. *A Constant Reader* would like to hear how to extract ink-marks from common sacks without injuring them. The marks have been made with a stencil plate.

58/245. *Inquirer.*—**Carbolic Acid Sheep-dip.**—Common size and soft soap, of each 1 lb.; melt together and add glycerine and brown carbolic acid, of each 1 lb. For use dissolve 1 lb. of this compound in 2 quarts of boiling water, and add 2 gallons of cold water. Macdougall's expired patent for sheep-wash was to treat 2 parts of crude carbolic acid or heavy oil of tar with 1 part of caustic soda or potash (50° Tweddle) so as to render it miscible with water. Heat to about 212° and add 1 part of fat or tallow, and stir to a smooth paste. Another non-poisonous composition for sheep-dipping is to take 1 lb. each of tobacco, sulphur, and size, and 5 gallons of water. Infuse the tobacco in the cold water, add the size and sulphur, and keep the mixture well stirred during application. Repeat application once in sixteen days. The size makes the dip rather sticky and enables the fleece to retain the sulphur better.

25/251. *H. B. & Co.*—**Ringworm in Cattle.**—Ung. hydrarg. biiodid. is the usual remedy. One application is usually enough. Carbolic acid in eighteen times its bulk of a mixture of equal parts of spirit, glycerine, and water, to be applied with a small brush on three consecutive days is also recommended. **Wash for Sheep.**—See answer to *Inquirer* (58/245). Arsenical washes are perhaps most frequently used. They are made by mixing 6 oz. each of arsenious acid and subcarbonate of potash into a paste with soft soap, and boiling with 2 or 3 gallons of water for half an hour, or until the arsenic is dissolved, then making up to 14 gallons. That quantity would suffice for thirty to fifty sheep.

We regret to note the death of M. Dusart, of the eminent firm of Rigaud & Dusart, manufacturers of pharmaceutical specialties, of Paris. In consequence of this death M. Chapoteaut, first-class pharmacien, and for ten years manager of the factory of the firm at Neuilly, has been taken into partnership, and the firm will henceforth be carried on under the style of "Rigaud & Chapoteaut."

## Obituary.

**BAXTER.**—On February 3, at 285 Kennington Road, S.W. Hannah, the beloved wife of William Baxter, Secretary of the South London School of Pharmacy. Aged 67.

**BRANDUM.**—On January 18, Mr. Alfred Brandum, chemist and druggist, Whitechapel Road, London. Aged 41.

**CHAMBERS.**—On December 31, Mr. William Chambers, chemist and druggist, Somerton. Aged 50.

**COOPER.**—On January 13, Mr. Henry George Cooper, chemist and druggist, Grantham. Aged 66.

**HARRISON.**—On January 21, Mr. John Cope Harrison, chemist and druggist, Brighton. Aged 38.

**LAING.**—On January 1, Mr. Thomas Laing, chemist and druggist, Aberdeen. Aged 46.

**MAITLAND.**—On January 9, Mr. Alexander Maitland, pharmaceutical chemist, Torrington Place, London. Aged 71.

**MANN.**—On January 25, Mr. William Mann, chemist and druggist, Cirstall. Aged 62.

**MARKHAM.**—On the 5th inst., at Market Place, Reiga, John Markham, Chemist, in his 74th year.

**MARSHALL.**—On Monday evening, February 9, Mr. William Marshall, pharmaceutical chemist, 9 Duggan Place, Rammes Road, Dublin, died very suddenly in his establishment. The deceased, who was an elderly gentleman, was in the act of attending to two ladies when he fell dead behind the counter. For some time past his health has not been good, but nothing serious was apprehended. Mr. Marshall was one of the first to qualify under the Irish Pharmacy Act during the years of grace allowed at its formation. Mr. Marshall was an Englishman, and for some time managed the business of the late Mr. Petrie, of Rathmines.

**MOLE.**—On December 31, Mr. William T. Mole, chemist and druggist, Hemel Hempstead. Aged 69.

**MORRIS.**—On January 16, Mr. Thomas Morris, chemist and druggist, Old Street, London. Aged 64.

**MUFF.**—On January 26, Mr. Richard Muff, chemist and druggist, Hull. Aged 43.

**PORRETT.**—On Dec. 14, very suddenly, at his residence, Mount View, Scarborough, Mr. Alderman Geo. Porrett, J.P. Aged 61. Mr. Porrett for above forty years had been connected with the retail trade, and at the time of his death was a trustee and active member of nearly every public body in his native town. After serving many years in the Council, in 1868 he was chosen an alderman, and in 1874 was elected mayor of Scarborough. He was one of the original members of the School Board, and continued a member of that body until the close of the last Board's term of office, when he retired, having, during that term, filled the office of vice-chairman. The cause of death was apoplexy of the brain, with failure of the heart's action. The funeral took place on Friday, December 19, and, after a service in the Westborough Wesleyan Chapel, the funeral service was completed at the Scarborough Cemetery. The procession was headed by the borough police, the members of the Corporation in their official robes, many of the magistracy, members of the School Board, the Harbour Commissioners, other public bodies, and a large gathering of the officials and leading members of the Wesleyan body, the majority of the places of business in the town being closed during the time of the funeral.

**RATTRAY.**—On January 3, Mr. William Rattray, chemist and druggist, Aberdeen. Aged 80.

**ROMANS.**—On January 7, Mr. Thomas Wood Roman, chemist and druggist, Wrotham. Aged 45.

**SNELL.**—On January 6, Mr. Harry B. Snell, chemist and druggist, East Stonehouse. Aged 68.

**TAYLOR.**—On November 11, Mr. Charles William Taylor, chemist and druggist, Darlington. Aged 36.

**WALKER.**—On January 7, Mr. John Walker, pharmaceutical chemist, Bradford. Aged 61.

**WEBSTER.**—On February 2, Mr. John Webster, chemist and druggist, Leeds. Aged 53.

**WHITE.**—On December 2, Mr. Frederick White, chemist and druggist, New Road, London. Aged 72.



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New York Medical Journal, 1880, Dr. F. WEIR.

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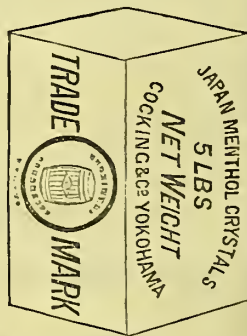
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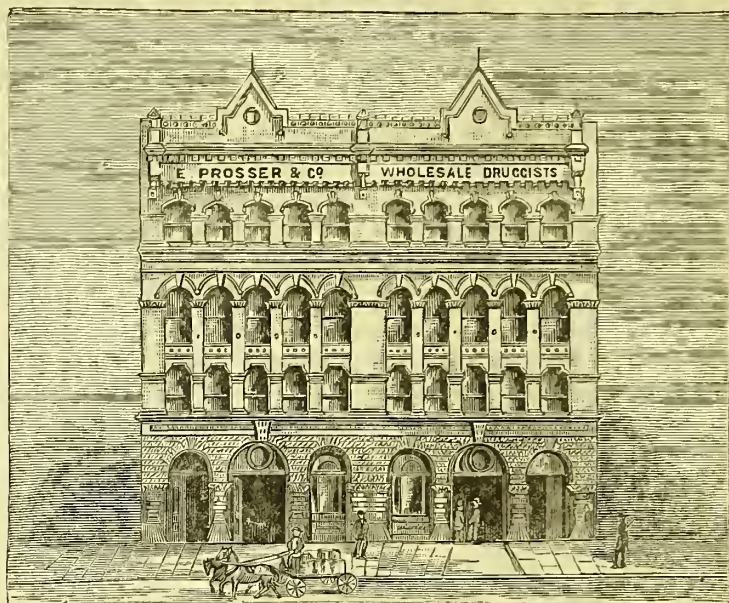
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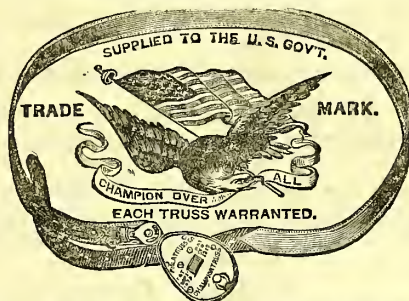
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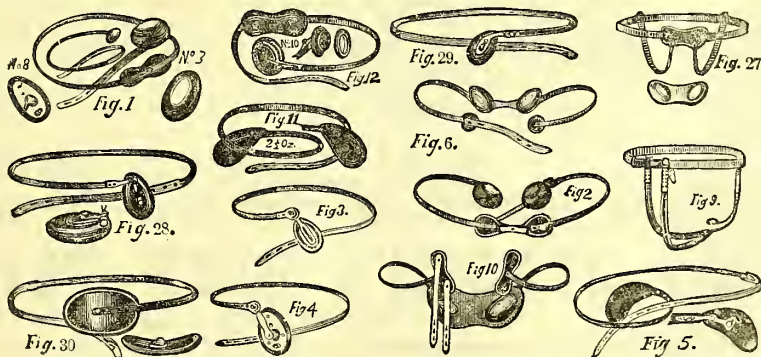
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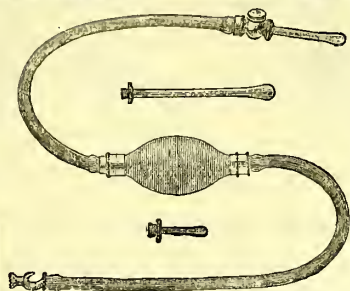
**GABRIEL & TROKE**, Wholesale Druggists, 82 City Road, LONDON.

Sold by **F. NEWBERY & SONS**, 1 King Edward Street, Newgate Street, LONDON;  
 and **GEHE & CO.**, DRESDEN.



# DAVIDSON SYRINGES

Nos. 1 and 2,  
**PURE BLOCK TIN  
PIPES.**



No. 4,  
**HARD RUBBER  
PIPES.**

**UNIVERSALLY ACKNOWLEDGED TO BE THE MOST PERFECT ENEMAS MADE.**  
**A PERFECT INSTRUMENT** that can always be relied upon is the **CHEAPEST.**

With the **DAVIDSON Syringes**, absolute perfection in the purity of stock, and skill of construction, are the objects aimed for, so that by their great durability they are much cheaper to use than any others.

## WE COMPETE ON QUALITY ONLY.

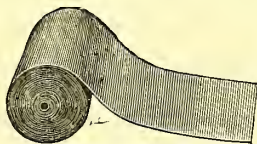
The trade never have any bad stock of **DAVIDSON Syringes**, which is so often the case with the cheap, worthless Syringes, such as rubber growing hard, pipes corroding, valves useless, &c., &c., and during the 25 years that we have made them, we do not recall a single complaint of their quality. The quality is specially desirable in countries where they have not the means of repairing, or where the climate effects the cheap adulterated rubber goods.

We have recently added a patent improvement to the Syringe in making the metal on the suction end of the tubing in the shape of a hook, so that the instrument can be hung up after use, and all the fluid allowed to drain out, which adds greatly to the durability of the Instrument.

These goods are exported to England, Germany, France, Holland, South America, Mexico, East Indies, &c.

## GREAT IMPROVEMENT IN RUBBER BANDAGES.

**DAVIDSON'S**  
**60 FEET**



DAVIDSON RUBBER CO.

**BANDAGES.**  
**LONG.**

The advantages in these Bandages will at once suggest themselves to Physicians and Druggists.

They are made **60 feet long** in four widths ( $1\frac{1}{2}$ , 2,  $2\frac{1}{2}$ , and 3 inches), so that any length or width desired can be cut off, and it relieves the Druggists from the necessity of carrying in stock a line of Bandages of various lengths.

Many objections are found with Bandages that are made with tapes on the end, as the tapes, being non-elastic, bind the limb so rigidly as to stop or impede the circulation.

With **Davidson Bandages** these objections are entirely removed, as they are secured in place by using diaper or safety pins, so that no part of the limb is bound by non-elastic material.

We give the following from the celebrated London Medical Journal, "*THE LANCET*," of March 25, 1882.

"**DAVIDSON RUBBER CO. ELASTIC BANDAGE.**—The Bandage seen by us is a very good article, pure, odourless, uniform, and with excellent smoothly-cut edges. It is prepared in lengths of 60 feet, from which any length can be cut. With it are sold small 'safety' pins for fastening the last turn, as it is objected to the tape usually fastened on to Martin's Bandages that it forms an in-elastic constrictor of the part, and in this objection there is some force. It is probably sufficient to say that this Bandage fully maintains the high character for rubber goods already won by this firm."

CATALOGUES FURNISHED ON APPLICATION TO

## DAVIDSON RUBBER CO.,

Manufacturers of Druggist, Surgical, and Fine Rubber Goods,

30 FRANKLIN STREET, BOSTON, MASS., U.S.A.





FOR PREVENTION, RELIEF, AND CURE OF  
**GOUT, RHEUMATISM, COLDS, NEURALGIA,**  
 AND ALL NERVOUS DISORDERS.

Consisting of Flannels, all Descriptions of Underclothing, Chest Preserver  
 Knee Caps, Knitting Yarn, Wadding, Pine Needle Oil for Embrocation,  
 Bath Extract, Soap, &c. &c.

CAUTION.—None Genuine without  
 Trade Mark and Signature.

*Lairitz*

SOLD BY ALL CHEMISTS AND DRUGGISTS  
 Wholesale of all DRUGGISTS' SUNDRIESMEN.

## JULIO STÜRUP & CO., Puerto Cabello, VENEZUELA, CHEMISTS, PHARMACISTS, AND WHOLESALE DRUGGISTS

GENERAL AGENTS FOR PATENT MEDICINES AND PERFUMES,

And Proprietors of GENIS & BARCON'S RENOWNED CHOCOLATE MANUFACTORY. The best Chocolate and  
 Pure Cacao Paste, with the Celebrated "Caracas" Cacao. Prices, 2s. 6d., 2s., and 1s. 6d.

## E. FOUGERA & CO.,

No. 30 NORTH WILLIAM STREET,  
 NEW YORK, U.S.A.,

Importers of and Agents for the Principal  
**FOREIGN MEDICINAL PREPARATIONS**  
**AND SPECIALTIES.**

AGENCIES AND CORRESPONDENCE SOLICITED.

## EISNER & MENDELSON

IMPORTERS AND EXPORTERS OF

**FOREIGN & DOMESTIC HERBS**  
**ROOTS, DRUGS,**  
**CHEMICALS & PATENT MEDICINES**

Consignments and Agencies solicited. Highest references furnished.  
 Sole Agents for the U.S. for Johann Hoff's Malt Extract.  
 " " " H. Trommsdorff's Chemicals.

818 & 320 RACE STREET, PHILADELPHIA, PA

# HOP BITTERS CAUTION.

*Our Preparation being duly Registered and Trade Marked under the Laws of Great Britain, and having been placed before the Public at great expense to us, we give notice that we shall fully protect our rights in every instance. Anyone making use of our Title, Labels, Bottles, or in any way attempting to trade on our reputation will be dealt with at once to the fullest extent of the law.*

**HOP BITTERS CO., London.**

**RELIEF FROM COUGH IN TEN MINUTES.**

## HAYMAN'S BALSAM OF HOREHOUND



Is the most certain and **SPEEDY REMEDY** for all **DISORDERS** of the **CHEST** and **LUNGS**. In Asthma and Consumption, Bronchitis, Coughs, Indisposition, Difficulty of Breathing, Spitting Blood, Whooping Cough, Hoarseness, Loss of Voice, &c., this Balsam gives instantaneous relief, and, if properly persevered with, scarcely ever fails to effect a rapid cure. It has now been tried for many years and has an established reputation, and many thousands have been benefited by its use.

**IT HAS A MOST PLEASANT TASTE.**

**IMPORTANT TESTIMONIAL.**—"AMPORT FINS, ANDOVER, MAY 29, 1869.—Sir, I have for some years had your Balsam of Horehound for Mrs. B. Webster, and intended writing to tell you how much benefit she has derived. She was considered consumptive, but the Balsam has quite restored her, and she is now quite strong. I have recommended you dozens of customers, and all have been pleased with it.—I am, yours, &c., H. B. WEBSTER.  
 Mr. HAYMAN, Chemist."

Mr. HORROX, Chemist, Mildenhall, writes to say:—"One of my customers says your Balsam is worth sixpence a drop."

**IN THE NURSERY** it is invaluable, as children are fond of it and take it eagerly. Immediately it is taken coughing ceases, restlessness is gone, and refreshing sleep ensues. No lady who has once tried it would ever afterwards be without it.

Prepared only by **A. HAYMAN, Chemist, Neath**; and sold by all Chemists. Price 1s. 1½d. and 2s. 9d. per Bottle.  
**WHOLESALE AGENTS.**—W. Sutton & Co.; Barclay & Sons; Newbery & Sons; Hovenden & Sons, 95 City Road, London; Felton, Grimwade & Co., Melbourne; Elliott Brothers, Sydney and Brisbane, Australia; Kempthorne, Prosser & Co. Auckland and Dunedin, New Zealand; Smith, Stanistreet & Co., Calcutta.



# OF INTEREST TO THE TRADE.

The undersigned ask the particular attention of the Trade generally to their Special Advertisements inserted in "The Chemist and Druggist" of January 15, 1885:—

Page 12 .....	FOSSILINE.
„ 23 .....	DRUGGISTS' SUNDRIES LIST.
„ 25 .....	LESCHER'S MATERIA MEDICA.
„ 68 .....	SAVARS REQUISITES.
„ 76 .....	CONROY'S MALT COFFEE.
„ 104 .....	MONTSERRAT LIME-FRUIT JUICE.
„ 148 .....	NOTICE TO CHEMISTS ABROAD.
„ 161 .....	TRADE ADVERTISEMENT.
„ 163 .....	EVANS' FLUID EXTRACTS.
„ 211 .....	POROUS PLAISTERS ON FELT.

And to the Advertisements on Pages 12, 118, 126, 152  
of this issue.

## EVANS, SONS & CO., LIVERPOOL.

**LONDON:**

**CANADA:**

EVANS, LESCHER & WEBB, EVANS, SONS & MASON, Limited,  
MONTREAL AND TORONTO.





# NOTICE.



## NEPENTHE.

### FERRIS & Co., v. GOODMAN.

**NOTICE IS HEREBY GIVEN** that by an Order of the Chancery Division of the High Court of Justice, made the 18th day of July, 1884, in the above action, **IT WAS ORDERED** that the Defendant and others be perpetually restrained from selling, or offering for sale, any formula or recipe for "**Nepenthe**," and from otherwise prejudicing the sale thereof by, or injuring the title thereto, or Trade Mark therein, of the Plaintiffs, **Messrs. Ferris & Co., of Bristol**, the registered proprietors thereof.

And it was further ordered that the Defendant do pay the costs of the said Action.

Dated this 12th day of August, 1884.

(Signed) CHILTON & GREEN-ARMYTAGE, BRISTOL,  
*Solicitors for the said Plaintiffs.*

## NEPENTHE.

(Prepared exclusively from Opium.)

The safest and best preparation of Opium; produces neither headache, sickness, nor constipation.

Dose, the same as that of Tinct. Opii, P.B.

**Price 8s. per pound.**

The word *NEPENTHE* being registered under the Trade Marks Act, Messrs. **FERRIS & CO.** have the *SOLE RIGHT* to use it; and the Trade are respectfully cautioned against any infringement of their rights.

*Trade and Wholesale Terms for NEPENTHE upon application.*

**FERRIS, BOORNE, TOWNSEND & BOUCHER,**  
MANUFACTURING CHEMISTS, BRISTOL.



# BAISS BROTHERS & CO., WHOLESALE AND EXPORT DRUGGISTS,

AND

Manufacturing Chemists and Druggists' Sundriesmen.

ESTABLISHED 1833.]

JEWRY STREET, LONDON, E.C.

[ESTABLISHED 1833.

QUALITY GUARANTEED BY  
AFFIXING OUR TRADE MARK  
TO EVERY PACKAGE.

TRADE MARK



QUALITY GUARANTEED BY  
AFFIXING OUR TRADE MARK  
TO EVERY PACKAGE.

FOR EXPORT ONLY.

An exhaustive illustrated Export Prices Current, comprising every requirement of the Chemist and Druggist, will be published on the 1st of January, April, July, and October, and can be had by application (post free) on receipt of trade card. The attention of the trade is especially called to their preparations, including Extracts, Concentrated Decoctions, and Infusions, for which their name is so well established, and are guaranteed to be prepared with the utmost care from the finest drugs, and which will keep in hot climates for any reasonable length of time.

Manufacturers of Fruit Essences, which form a ready means when mixed with Acidulated Simple Syrup, of producing an article that has all the flavour of the freshly pressed fruit, and can thus be used with aerated water as a most refreshing drink in all hot climates.

CORRESPONDENCE IN ALL LANGUAGES.

*Ethers, Alcohols, Liniments, and Tinctures shipped in bond at lowest market prices.*

Patent Medicines and Proprietary Articles at special net prices. Scientific and Philosophical Instruments. Surgical Instruments.

Orders sent through Merchants should specially bear the name of BAISS BROTHERS & Co., and will be put on very best terms.

London International and Universal Exhibition, 1884, Gold Medal Awarded for our Pharmaceutical Preparations.  
Calcutta Exhibition, First-class Certificate and Two Prize Medals Awarded for our Pharmaceutical Preparations

## HEWLETT'S MIST. PEPSINÆ CO. C. BISMUTHO.

Highly recommended in various forms of dyspepsia, having a direct action upon the mucous membrane of the stomach and testines as a sedative. It can be administered with marked and almost instantaneous effect in the irritative form of dyspepsia, and especially when *pyrosis* is a conspicuous symptom, and pain occurs an hour or more after food. In simple neuralgic gastric pain following eating, occurring in feeble subjects, it is especially indicated, and even in *carcinoma* it has been used with great success in alleviating pain and vomiting.

In the dyspepsia of patients dependent upon some organic disease, and where there is a decided loss of nerve power, it is of singular service. Thus, for instance, a person after a meal complains of a peculiar gnawing and emptiness, with slight pain at the epigastrium, evident signs of general relaxation and loss of nerve power, clinical experience has shown that it is of great service as a tonic and stomachic. A portion of its value arises, it may be, from its action upon the spinal motor nerve-centres. These things as they may, experience has abundantly demonstrated the value of the compound as a stomachic, antidyseptic, and tonic, in general functional atony and relaxation, and in the various forms of dyspepsia, constipation, or diarrhoea, connected with atony of the visceral muscular coat, the Mist. Pepsinæ Co. c. Bismutho is a very valuable remedy. In the *exhausting* *urgings of Phthisis*, accompanied with night sweats and restlessness, Dr. MATHEWS, of Nantwich, has used it with marked and appreciable effect.

Price (in England) 10s. 6d. per pound.

Physicians will oblige, when ordering Mist. Pepsinæ Co. c. Bismutho, by writing Mist. Pepsinæ Co. (Hewlett's).

Packed (for Dispensing only) in 10-oz., 22-oz., 40-oz., and 90-oz. Bottles.

LONDON MEDICAL RECORD REPORT.

MISTURA PEPSINÆ COMPOSITA CUM BISMUTHO.

"This combination of Messrs. HEWLETT is one which has been extensively tested, and with good results. It is justly popular in the profession as a very valuable and effective combination. It serves not only to improve aepsia, but to lessen the gastric pain and to facilitate difficult and painful digestion, without setting up any evils of its own. It is a very good crutch for persons of weak stomach to lean on."—January 15th, 1881.

**C. J. HEWLETT & SON,**  
MANUFACTURING AND PHARMACEUTICAL CHEMISTS,  
0, 41 & 42 CHARLOTTE STREET, LONDON, E.C. [Established 1832.



# DUNCAN, FLOCKHART & CO.,

WHOLESALE AND EXPORT DRUGGISTS, EDINBURGH.

## CHLOROFORM

Prepared from Pure and Methylated Spirit.

Put up in all sizes of bottles. A strap with Name and Trade Mark of the Firm is placed over the stopper of each bottle. For Export, in bottles closed and luted (stoppers attached), and in hermetically sealed flasks when required.

M.B.—We guarantee our Chloroform prepared from METHYLATED SPIRIT to be PURE CHLOROFORM, answering all the tests of the British Pharmacopœia.

## CHLORIC ETHER.

SP. AMMON. AROMAT.

SP. ÆTHER. NITROS.

SYR. FERRI PHOS. CO. (PARRISH).

Fluid Extracts, Concentrated Infusions, and all Pharmacopœial Preparations.

MANUFACTURERS OF THE CELEBRATED

## BLUE BLACK WRITING INK & COPYING INK.

SHIPPERS SUPPLIED ON LIBERAL TERMS.

White Gutta Percha for Stopping Teeth, in 6d. and 1s. Boxes.

# J. F. MACFARLAN & CO.,

EDINBURGH AND LONDON,

Manufacturers of

## MORPHIA AND ITS SALTS,

*And all Products from Opium.*

## PURE CHLOROFORM

Answering all the Tests of the British Pharmacopœia.

ALSO, ANÆSTHETIC ETHER, ALOIN, BEBEERIN, CHRYSOPHANIC ACID, SALICI.

MAY BE HAD FROM ALL THE WHOLESALE HOUSES, AND AT

17 NORTH BRIDGE, EDINBURGH, and 71 COLEMAN ST., LONDON

## DRUGS, CHEMICALS, AND PHARMACEUTICAL PREPARATIONS

# BARRON, SQUIRE & CO.

(LATE DREW. BARRON, & CO.),

## WHOLESALE & EXPORT DRUGGISTS BUSH LANE, LONDON, E.C.,

MANUFACTURERS OF ALL DESCRIPTIONS OF PHARMACEUTICAL PREPARATIONS,  
Beg to inform Merchants, Shippers, &c., that all Indents entrusted to them will receive careful attention and prompt execution.

Messrs. B., S. & Co. request the attention of their friends and the Trade, at home and abroad, to the having PURCHASED THE BUSINESS of Messrs. JAMES BASS & SONS, Hatton Garden, and with it the various Formulæ from which their Special Preparations have been made, and pledge themselves to supply them in all their integrity.

*Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.*



# C. R. HARKER, STAGG & MOSS

WHOLESALE CHEMISTS & DRUGGISTS

DISTILLERS AND IMPORTERS OF ESSENTIAL OILS



## MANUFACTURING PHARMACEUTICAL CHEMISTS

SOLE PROPRIETORS AND MAKERS OF FIELD'S

LIQUID EXTRACTS, LIQUORS,  
AND  
CONCENTRATED INFUSIONS,

Unequalled for Strength, Aroma, and Keeping Properties.

Price List of the above, and General Prices Current of Drugs, Chemicals, &c., will be sent on application.

15 LAURENCE POUNTNEY LANE, LONDON, E.C.

### SYMES & CO.,

Pharmaceutical Chemists,

LIVERPOOL,

EXPORT DRUG MERCHANTS,

IMPORTERS OF

BRAZILIAN DRUGS.

AMERICAN & CONTINENTAL SPECIALITIES.

**MENTHOL.**

MANUFACTURERS OF

**OL. LAVAND. RECT.**

Now largely replacing the Mitcham Oil. 21/- lb.

**LAC BISMUTHI**

LAC BISMUTHI ET CERIL.

HYDROBROMIC SYRUP OF HYPOPHOSPHITES, &c.

London Depot—Snow Hill Buildings, E.C.

### SPECIAL PHARMACEUTICAL PREPARATIONS.

#### GLYCEROLE OF PEPSINE

A SPECIAL PREPARATION.

Perfectly reliable, and the most valuable fluid form for the administration of *Pepsin Porci*. It is of definite strength and slightly acid; free from odour, and almost tasteless.

7/ per lb., C. Qts. 6/6, W. Qts. 6/.

WILL KEEP GOOD IN ANY CLIMATE.

#### THE TRUE OL. RUSCI.

The new remedy for Eczema and Ringworm. Imported direct from the interior of Russia. See *Pharm. Journ.*, pp. 381, 439.

8/ per lb., C. Qts. 7/, W. Qts. 6/.

Also. TINCT. RUSCI, COLLOD. RUSCI, and POMADE RUSCI, "Hebra."

#### SUCCUS TARAXACI

FROM THE FRESH AUTUMNAL ROOT.

Prepared by a special process in which the flavour is preserved and the bitter principle retained; the product being bright and clear, with all the medicinal qualities of the fresh root unimpaired.

1/10 per lb., C. Qts 1 8, W. Qts. 1/6.

WILL KEEP GOOD IN ANY CLIMATE.

THOMAS GREENISH, Pharmaceutical Chemist,  
20 New Street, Dorset Square, N.W., and  
5 Bathurst Street, Hyde Park, W.



# FLUID EXTRACTS (EVANS)



Over 100 now in Stock.



Complete List, see Advertisement page 163, "Chemist and Druggist," Jan. 15, 1885



SOLE MANUFACTURERS—

EVANS, LESCHER & WEBB,  
LONDON.

EVANS, SONS & CO.,  
LIVERPOOL.

## ESSENTIAL

For centuries this oil has enjoyed a wide-spread reputation in China and Japan as an external remedial agent in Rheumatism, Inflammation of the Joints, and Glandular Swellings.

## OIL

Liquid Camphor in its natural and most active form. Imported from China and Japan. Made by distilling the wood of the Camphor Tree (*Laurus Camphora*). Chemically consists of a saturated solution of Camphor in a terpene, the proportion of about one in four.

This natural oil must speedily supersede the fatty oils and ointments of Camphor now in use, as it is both more cleanly and efficacious.

Price, 1s. 3d. per lb.;  
In Winchester Quarts, 1s. net.  
In Ordering specify "UMNEY'S."

## CAMPHOR

WRIGHT, LAYMAN & UMNEY,  
SOUTHWARK, LONDON.

GEORGE J. CROWTHER & CO., WOODHOUSE  
CHEMICAL WORKS, LEEDS

SPECIALITY—

## IRON LIQUOR, PURE NITRATE OF IRON

For Silk Dyers, Cotton Dyers, Burl Dyeing, Paper Makers, &c.

CAN BE SENT IN CASKS TO ANY DISTANCE.

FOR PRICES AND PARTICULARS APPLY AS ABOVE.

## COCAÏNE HYDROCHLORATE

(SOLUBLE)

Answering to the tests laid down by the Pharmacopœia Committee of the German Pharmaceutical Association (see *Pharmaceutical Journal*, December 27, 1884).

PURE ALKALOID, ACETATE, CITRATE, SALICYLATE, and other salts of COCAÏNE.

PILOCARPINE and its salts.

FLUID EXTRACT OF COCA and all other FLUID EXTRACTS (valoids) of the U.S. Pharmacopœia.

ALKALOIDS.

"Permanent" Solutions for Hypodermic Injection. Soluble Medicated Pessaries, Suppositories, and Bougies. Surgical and Medicinal Plasters.

Prices on Application.

TANNER & CO., Manufacturing Chemists,  
Tottenham, LONDON.

## METHYLENE.

Discovered to be a general Anæsthetic by

DR. RICHARDSON in 1857.

- 10. Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.

COMPOUND ANÆSTHETIC ETHER.

For producing Local Anæsthesia.

In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.

OZONIC ETHER.

4-oz. and 16-oz. Stopped Bottles, 3s. 6d. and 12s.

PEROXIDE OF HYDROGEN.

First introduced as a Medicine by Dr. RICHARDSON.

ETHYLATE of SODIUM

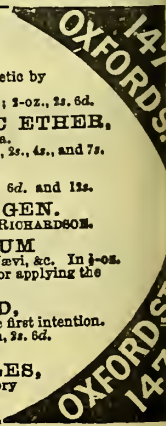
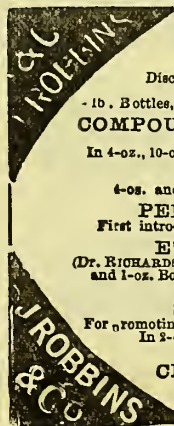
(Dr. RICHARDSON'S Formula), for removing Nævi, &c. In 4-oz. and 1-oz. Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. and 4s.

STYPTIC COLLOID.

For promoting the Healing of Wounds by the first intention. In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d. and 4s. 6d.; 16-oz., 12s.

CHARCOAL CAPSULES,

Containing pure Vegetable Ivory Charcoal. In Boxes, 2s. 6d. each.





ESTABLISHED OVER 140 YEARS.



PRIZE MEDAL, PARIS, 1878.

THREE PRIZE MEDALS,  
CALCUTTA, 1884.

PRIZE MEDAL, PARIS, 1867.

**BURGOYNE,**  
**BURBIDGES,**  
**CYRIAX &**  
**FARRIES,**  
WHOLESALE  
DRUGGISTS, and  
MANUFACTURING PHARMACEUTICAL CHEMISTS,  
6 COLEMAN ST., LONDON, E.C.



SPECIALITIES—

**PEPTOLEINE**

(REGISTERED)

A VALUABLE REMEDY IN CONSUMPTION AND OTHER WASTING DISEASES.

This elegant preparation is an Emulsion containing 50 per cent. of the finest Cod-Liver Oil, combined with nutritious tonics on an entirely new principle. It is rendered palatable by the addition of Aromatics, and is, we venture to assert, the most perfect emulsion of Cod-Liver Oil hitherto brought before the notice of the Medical Profession and the Public. We guarantee it to *keep well in any climate.*

**FLUID EXTRACTS**

These preparations are manufactured from the best selected Drugs, and are recommended for their uniformity and reliability. They are so prepared that one fluid ounce of the finished Extract represents an equivalent weight of the pure drug

## SOLE CONSIGNEES OF

Salicylic Acid and all Salicylic Salts (Kolbe's Patent).  
Nifline Crystals and Vanilla Sugar (De Laire's Patent), Coumarine, Heliotropine, &c.  
Atipyrin and Kairin, the new Febrifuges.

Kahlbaum's Pure Alcoholic Compounds, for original research. &c.

Chanteaud's Dosimetric Medicines (Dr. Burggraeve's system).—Price List upon application.

Parke, Davis & Co.'s Fluid and Solid Extracts, Concentrations, and other Pharmaceutical Preparations.

## WHOLESALE DEPOT OF

Chanteaud's Seidlitz, Retail 2/6; per doz. 24/, less 25 % | Malto Pepsyn (Hazen Morse's), Retail 2/9; per doz. 24/6.



# Dr. J. COLLIS BROWNE'S CHLORODYNE

THE ORIGINAL AND ONLY GENUINE.

## IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,  
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, a Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on a Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

ORIGINAL AND

## FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—



ONLY GENUINE.

Apothecaries' Hall, London	Frazer & Green, Glasgow	Morson, T., & Son, London
Allen, Hanbury & Co., "	Gale & Co., London	Newbery & Sons, London
Baiss Brothers, Birmingham	Giles & Son, Clifton	Oldham, G., & Co., Dub
Banks & Richards, "	Goulding, Messrs. Cork	Parsons & Richardson, Leices
Barron, Harvey & Co., London	Gratton & Co., Belfast	Peake, Allen & Co., Dub
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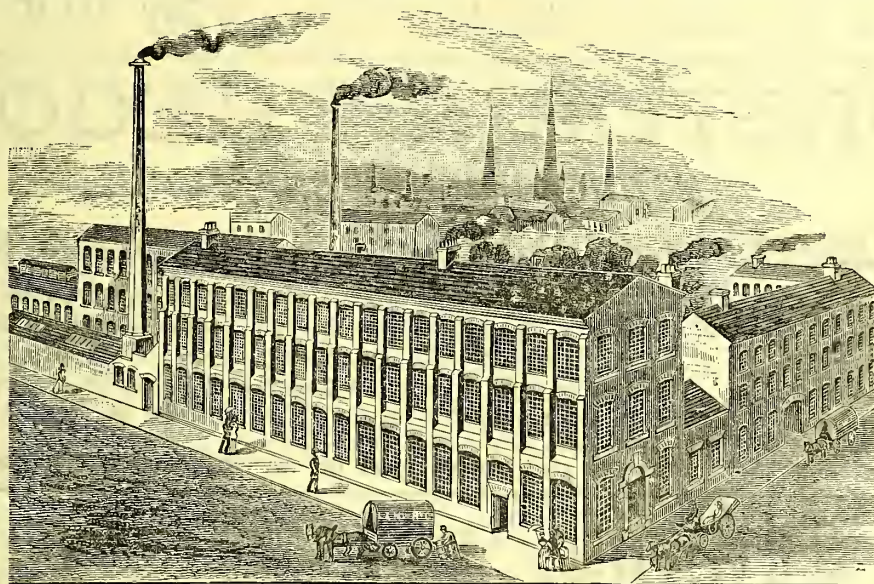


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[ESTABLISHED 184

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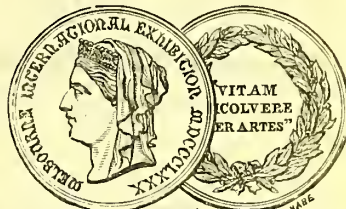


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GOLD MEDAL, HEALTH EXHIBITION, 1884

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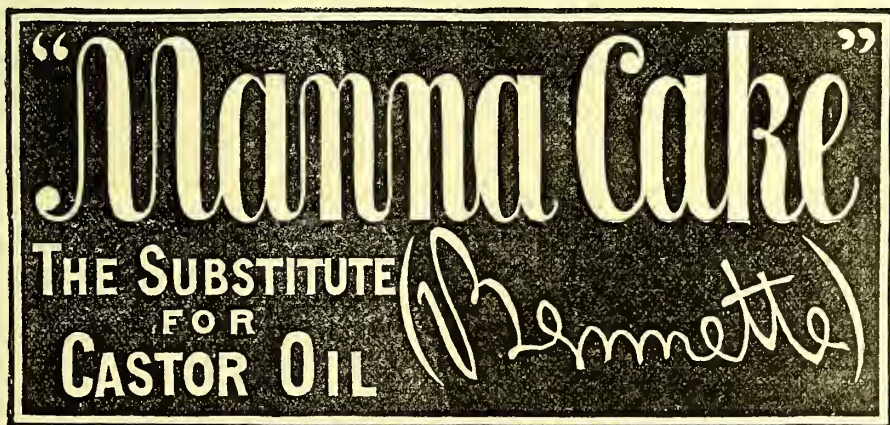
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## THE Cure for

Neuralgia	Stiffness from violent exercise	Paralysis
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Nervous Headache	Stiff Neck	Corns
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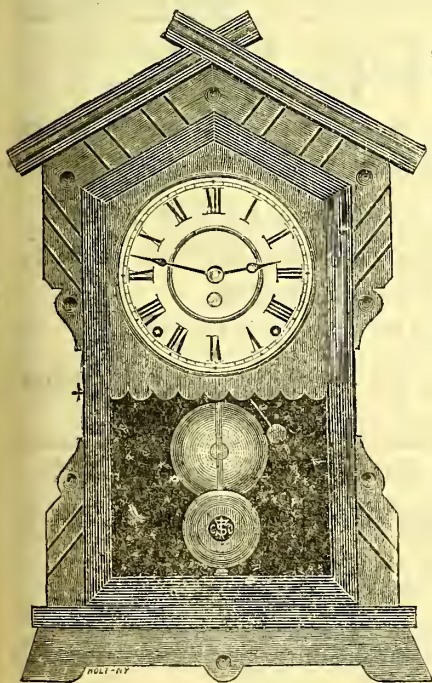
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*Price Lists, Samples, and Special Quotations on application. Foreign Indents receive our special attention.***MORISON'S PILLS,  
POWDERS AND OINTMENT**The most Safe, Efficacious, and Prompt **VEGETABLE MEDICINE** for Family Use.**COMPOUNDED OF THE PUREST VEGETABLE INGREDIENTS ONLY.****FIFTY-FIVE YEARS OF UNINTERRUPTED SUCCESS.***Pills in Boxes at 7½d., 1s. 1½d., 2s. 9d., 4s. 6d., and 11s. Powders, 1s. 1½d. Ointment, 1s. 1½d. and 2s. 9d.***Wholesale: BRITISH COLLEGE OF HEALTH, 33 Euston Road, London**

And of the Principal Chemists and Druggists throughout the Kingdom.

**LOWE'S PILLS**For the **HEAD, STOMACH, and LIVER.****LOWE'S PILLS.**

When the Proprietor of these Pills relinquished the Medical Profession, after being in it seven years, he found that he required something to counterbalance the want of exercise. He made up these Pills for his own use. A friend complaining of the same symptoms, he gave him some of the Pills, and a few days after received his First Testimonial, and was persuaded to advertise them. He has done so, with the happiest results.

**THE FIRST TESTIMONIAL.**—From Mr. ROBINSON, Librarian Athenæum, Wolverhampton.—I suffered for more than a week from very acute pains between my shoulders. I was recommended to get a box of Mr. Lowe's Antibilious Pills; I did so, and after taking four of the pills, I found the pain entirely removed. They are exceedingly gentle in their operation, and free from producing those griping pains which many are apt to do. No family ought to be without such an invaluable medicine.

B. ROBINSON, Librarian, Queen Street.

**LOWE'S PILLS.**

Sold in Boxes at 1s. 1½d., 2s. 9d., and 11s., each, by all Chemists; or post free from the Proprietor for 15 or 36 stamps, or Postal Orders for 11s. By ROBERT HENRY LOWE, 330 Bilston Road, Wolverhampton.

**W. F. SMITH'S TASTELESS  
DANDELION ANTIBILIOUS PILLS***Price, 1s. 1½d. and 2s. 9d. per Box.**Registered.] TARAX. AND PODOPH. [Registered.***A NON-MERCURIAL LIVER MEDICINE, specially used to the habitually constipated, and safe for all ages.**

Worthy of trade notice. Reliable, and rapidly increasing in public acceptance.

*Urgent caution needed against injurious imitations.*

PREPARED ONLY BY

**W. F. SMITH, M.P.S.**

280 WALWORTH ROAD, LONDON.

To be had of the usual Houses at Home and Abroad



# A WONDERFUL MEDICINE!



TRADE MARK.  
No. 1416.

Between thirty and forty years ago a Medicine was introduced to the public and suffering humanity was invited to try the same.

The Proprietor knew from experience that success was certain, but the human breast is so imbued with prejudice, that it forms one of the strongest barriers to break down and the greatest enemy to overcome before any headway can be made towards the mansion of success. Truth has often proved itself to be "stranger than fiction," and it is a fact as solid as truth that

## BEECHAM'S PILLS

have now become one of the leading Patent Medicines of the present day. From north to south, and from east to west, they are to be found in the homes of the rich and the poor. All classes of society use them, and they are by thousands declared to be

### WORTH A GUINEA A BOX.

For a Weak Stomach, Impaired Digestion, and all Disorders of the Liver, they act like "MAGIC," and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long-lost complexion, bring back the keen edge of appetite, and arouse into action, with the ROSE-BUD of health, the whole physical energy of the human frame. These are "FACTS" admitted by thousands, embracing all classes of Society, and one of the best guarantees to the Nervous and Debilitated is, BEECHAM'S PILLS have the LARGEST SALE of any Patent Medicine in England.

*In South Africa BEECHAM'S PILLS have the largest sale of any Patent Medicine ever introduced into that part of the World.*

All Patent Medicine Dealers abroad will find BEECHAM'S PILLS one of the most profitable and one of the best selling articles in the Market. The demand for them is regular, and all Foreign Houses who are desirous of getting a First-class Patent Medicine are respectfully requested to get BEECHAM'S PILLS from the leading Wholesale Houses in England (as no business will be done with any Foreign House by the Proprietor direct).

**CAUTION.**—The Public are requested to notice that the words "BEECHAM'S PILLS, ST. HELENS," are on the Government Stamp affixed to each Box of the Pills; if not on, they are a Forgery.

Prepared only, and Sold Wholesale and Retail, by the Proprietor,

## THOMAS BEECHAM, ST. HELENS, LANCASHIRE, ENGLAND.

In Boxes, 1s. 1½d. and 2s. 9d. each.

**N.B.—FULL DIRECTIONS ARE GIVEN WITH EACH BOX**



# **T. KERFOOT,** **MANUFACTURING PHARMACEUTICAL CHEMIST**

**MEDLOCK VALE WORKS, MANCHESTER.**

*Manufacturer, by Special Process, of every description of Superior Medicated Lozenges, Medicated Jujubes, Candies, and Boiled Sugars; also Granular Citrate of Magnesia, and all Granular Preparations.*

## **SPECIAL COUGH LOZENGES.**

The "Special Cough Lozenges," introduced in the winter of 1882, have had a remarkable sale; they have a peculiar and distinctive flavour and colour, and are free from all opiates. They contain Verbascum Thapsus, Squill, Ipecac, Tolu, Benzoic Acid, &c., and are an agreeable and efficient Cough Lozenge. They may be given with equal safety to children and adults. The Special Cough Lozenges can be stamped with customer's own name in quantities of 7 lbs. and upwards. Price 1s. 6d. per lb.

## **ENGLISH BRONCHIAL LOZENGES.**

These are superior both in flavour and efficacy to the American lozenges, and always amply repay the trouble of introduction. Although they contain NO OPIATE they are an efficient Cough Lozenge, and for the use of Singers they are unique.

## **COMPRESSED CHLORATE OF POTASH PEARLS.**

Unlike most articles of this class *now in the market*, the Pearls are made by steam-driven machinery of great power; they are extremely hard, and hence, dissolving more slowly in the mouth than other kinds, the local action is longer maintained and the beneficial effect much enhanced. 6d. boxes, 3s. per doz.; bulk, 3s. 6d. per lb.

## **COUGH DROPS.**

Superior quality, 8d. per lb. Special cash quotations for large buyers.

*An endless variety of Highly-finished Medicated Lozenges and Jujubes of every description. Price Lists free on application.*

**T. KERFOOT,**  
**MEDLOCK VALE WORKS, MANCHESTER.**



# KERFOOT'S CHLORODYNE AND CHLORODYNE LOZENGES.

The attention of the Trade is solicited to the above well-known preparations. Having unusual facilities for their manufacture upon a large scale, I can offer great advantages both in quality and price.

**T. KERFOOT, MEDLOCK VALE WORKS, MANCHESTER.**

## KING'S HOP BITTERS

(THE KING OF PICK-ME-UPS)

Are old-established, registered, and protected under the Trade Marks Act, as having been prepared before August, 1875. They are an excellent aromatic tonic, palatable, and command a good sale. Put up in bottles to retail at 1/4 and 2/3 per bottle, also in packets containing ingredients for making the same at 7/4d. and 1/14 per packet.

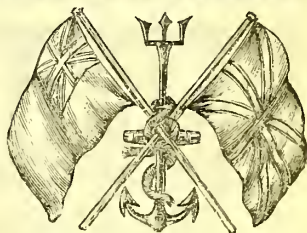
Show Tablets and Counter Bills with testimonials supplied. Each Bottle and Packet bear, as Trade Marks, "King Alfred's Head" and "British Flags." Beware of Infringements.

MANUFACTURED ONLY AT

**King's Hop Bitter Depot, Croydon.**

Special agents appointed in all parts. More wanted for unrepresented localities. Obtainable direct from ALFRED KING & CO., who will forward all particulars on application.

London Agents, Messrs. Newbery & Son, 1 King Edward St., Newgate St., E.C.



FINE HEALTHY CHILDREN!

## GELDART'S GALACTAGOGUE

OR MILK PRODUCER,

IN BOTTLES, 2s. 9d., 4s. 6d. and 11s.

THIS preparation is the greatest boon ever invented for Mothers and Wet Nurses. Its use produces a copious flow of rich nourishing milk, which thoroughly satisfies the infant, prevents rickets, promotes easy dentition, and lays the foundation of a strong, healthy constitution. It also prevents debility in the mother whilst suckling, and is a capital remedy for acidity, flatulence, indigestion, &c. If taken during pregnancy it promotes perfect gestation, and effectively prevents decay of the teeth, so common to mothers during this period.

Commands a Ready Sale wherever introduced.

Will keep good in any climate.

Chemists supplied with Handbills through any of the Wholesale Houses.

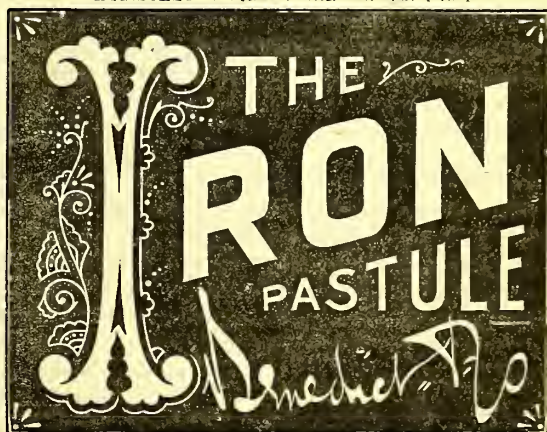
PREPARED BY

**J. GELDART,**

PHARMACIST, LIVERPOOL,

Proprietor of the Celebrated PARISIAN STARCH GLAZE,  
and Sole Consignee for the United Kingdom of the world-  
renowned BRAND'S AMERICAN BITTERS.

REGISTERED TRADE-MARK. No. 41,570, 1874



Retail, 1/4d. each; wholesale, 12s. per gross, less 15 per cent. discount.

SOLE  
AGENCY

Offered to one chemist only in each town or district. 750 papers arranged with. No wholesale house supplied at all. Splendidly done up. Compare profits. For Terms write—

**BENEDICT & CO., 1 Grosvenor Rd., Birkenhead.**

Special terms to Foreign and Colonial houses Contracting for large areas.



# IMPORTANT NOTICE.

## £200 Reward. PIRACY. £200 Reward

The above reward will be paid by the Proprietors of "**LIEBIG'S CHEMICAL FOOD**," or Wine of Phosphates, to any person or persons who shall give such information as will lead to the discovery and conviction of any one making or offering for sale spurious or forged imitations of their proprietary article.

TO OBVIATE FURTHER PIRACY, the following alterations have been made:—

The words "**LIEBIG'S CHEMICAL FOOD**" are now engraved on the Government Stamps, the words in water mark on the Labels, as well as being moulded on the Bottles.

The Proprietors therefore request all *Chemists and Patent Medicine Vendors* to RETURN for exchange ANY STOCK they may have of "**LIEBIG'S CHEMICAL FOOD**," or Wine of Phosphates, to either their Wholesale House or direct to them,

**12 York Buildings, Adelphi, London, W.C.**

*In all our Advertisements from this date, the attention of the Public will be called to these alterations, and they will be requested only to purchase such Bottles as have the Name Engraved on the Government Stamps, and the Name in Water Mark on the Labels.*

# "MEDICATED GRAPES"

THE GREATEST PHARMACEUTICAL NOVELTY OF THE DAY.

BY ROYAL LETTERS PATENT.

- "MEDICATED GRAPES" are the true fruit of the vine charged with the medicine and beautifully crystallised—in reality, medicine disguised as a sweetmeat.
- "MEDICATED GRAPES" are put up in 4 forms, in 2-lb. Bottles with highly-finished label, and prove a very attractive article on the counter.
- "MEDICATED GRAPES" are, "No. 1, Aperient"; "No. 2, Worm"; "No. 3, Cough"; "No. 4, Digestive"; and can be retailed at 3d. and 4d. per ounce.
- "MEDICATED GRAPES" can be had direct from the Patentees, or through the usual wholesale houses.
- "MEDICATED GRAPES." Every Chemist should at once order a sample bottle of each kind, as their popularity is assured.
- "MEDICATED GRAPES." A special make is prepared for the Foreign Trade, and these orders should be plainly marked, "For Export."

CHEMISTS AND MEDICAL MEN CAN HAVE ANY FORMULÆ PREPARED IN THIS WAY TO THEIR ORDER.

DR. LENNOX BROWN, Throat Hospital, London, writes:—"An ingenious idea, and without doubt a valuable medium."

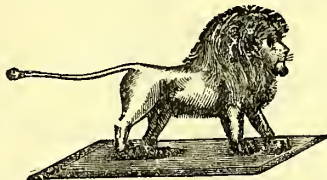
**BENEDICT & CO., 23 RUTLAND ST., LEICESTER.**



# AMPUTATION AVOIDED.

## THE KNIFE SUPERSEDED.

TRADE MARK.

REGISTERED OVER ALL THE  
GLOBE.

TRADE MARK.

REGISTERED OVER ALL THE  
GLOBE.

### E. BURGESS'

# LION OINTMENT & PILLS

Cure the worst and most obstinate cases of Ulcers, Abscesses, Cancers, Tumours, Polypi, Carbuncles, Piles, Poisoned Wounds of all kinds (including Dog and Venomous Bites), and every form of Eruption and Skin Disease; also Ulcerated and Cancerous Affections peculiar to Females, without the aid of Lancet or Knife. Numbers have been cured after leaving various London Hospitals as incurable, or curable only by amputation.

The following are specimens of Testimonials received. A list of over sixty, each bearing full name and address, is wrapped round each box.

ERSKINE HOUSE, NEAR TIDAL BASIN, VICTORIA DOCKS; Dec. 31, 1883.

DEAR SIR.—I beg to inform you I have not a spot about me, and I believe you are an instrument in the Almighty's hands to do a world of good for your fellow-creatures. Anyone to have seen me this time twelve months, and see me now, would say it was the greatest miracle ever made in skin disease. I have had spots on me for about forty years, have taken medicine of every description, baths, &c., &c., until November, 1882, and nothing ever could touch it. I was then recommended to use the Lion Ointment and Pills as a certain cure, and I found them the masterpiece of the world. I have consulted great men, and they could not touch it. People must not be afraid of using the Lion Ointment; the more it pinches them the more it is drawing the disease out—only persevere, and the Lion Ointment and Pills will do their work. Now, God bless you in your undertaking.—From yours faithfully,  
MR. BURGESS. SILVESTER STONEHOUSE STUART.

ALMA ROAD, next door to EAST HILL HOTEL, WANDSWORTH, late 2 BOLTON ROAD, GROVE PARK, CHISWICK, MIDDLESEX; February 7, 1883.

DEAR SIR.—I am happy to forward to you the following testimonial of the great value of your Lion Ointment and Pills. Through the ill-treatment of my husband I have been suffering with poisoned blood, and, in consequence, a large abscess formed in my neck, also syphilis affecting my leg. I have, too, been suffering many years from a diseased hip. I consulted several physicians, who said that I should not recover unless I had the bone taken out. Last May, 1882, I was advised to use your Lion Ointment and Pills; by so doing I can scarcely describe the benefit I received in a very short time, and I am happy to tell you that they saved my life, and I am now perfectly cured. Hoping through my case your wonderful Ointment and Pills may get well known for the benefit of my poor fellow-creatures. You are at liberty to refer anyone to me at any time should you wish.

To MR. E. BURGESS.

PROSPECT HOUSE, AMERSHAM COMMON; June 25, 1881.

SIR.—Please send me by return one box of your Pills. The box of Lion Ointment I sent for is for Erysipelas in the face; do you think it suitable? [Most effective.] Also send me another box of the Lion Ointment, I have enclosed stamps for the same. I have had Ointment from you before through a friend of mine. I had been suffering from a small tumour in the head for some years, and had the advice of medical men, and all said I must have it taken out; but, on applying your Ointment, in a fortnight it drew it out and made a complete cure of it.—Yours respectfully,  
To MR. E. BURGESS. MRS. E. HILL.

ELM LODGE, WIMBLEDON PARK, late 25 BALLANTINE STREET, YORK ROAD WANDSWORTH; January 17, 1881.

DEAR SIR.—Having attended St. Thomas's Hospital for nine months, suffering greatly with a tumour, extending from the back of the ear to the collar bone, affecting the shoulder, and receiving not the least benefit, I was earnestly persuaded to give your Lion Ointment a trial. By so doing I can scarcely describe the benefit I received in a very short time. I am truly thankful to state I am quite well and am able to resume my duties without trouble or inconvenience. I was also attended by several doctors during the five years I have been suffering from the tumour, not having received the slightest benefit. Dear Sir, you are at liberty to publish this, or send anyone to my residence for satisfaction.—I am, Sir, yours most respectfully,  
To MR. BURGESS. MRS. H. GRIFFIN.

[The above was a most serious case. Photographs of the same, uncured and cured, and the Fungus and Diseased Bone drawn away by the Ointment, can be seen on application at 117 High Holborn, W.C.]

7 SHAFTESBURY PLACE, ALDERSGATE STREET, E.C.; May 20, 1882.

SIR.—It gives me great pleasure to add to your numerous testimonials. For four years I suffered with a very bad leg, and attended St. Bartholomew's, the University, and Dalston Hospitals, and various Dispensaries, where they told me it was a cancerous ulcer, incurable, that I must lose my leg. However, being recommended to use your Lion Ointment, I did so, and in three months the cancer was drawn away, and my leg made quite well.—I remain, yours &c.,  
To MR. E. BURGESS. LUCY IBBS.

VERULAM, PORT NATAL, SOUTH AFRICA; March 1, 1881.

DEAR SIR.—I feel it my duty to thank you for the wonderful way in which your Lion Ointment has cured my hand of skin disease, which I had endured for over nine years. When I was residing at St. John's Hill, Wandsworth, I purchased a box of your Ointment, and by the end of the fourth week, it had perfectly cured my hand, and I have seen nothing of it since. Previously to applying your Ointment, I had been to my own doctor at Wandsworth with it, and also to several Skin Disease Hospitals in London, but to no avail. They said it could not be cured, and must, therefore, be endured; but, as I said before, your Ointment has cured it. When I came out here (twelve months ago), I brought some with me, and am glad I did, for I have found it very useful. I gave some to a gentleman who had his legs covered with Natal sores, and could not walk for them, and it has perfectly cured him. I have been obliged to send home to my friends to send me out some, which I expect shortly to arrive, for, as I said before, it is very useful; in fact, cures everything in which I have tried it. If only you had an agent here, I would recommend it to everybody.—I am, dear Sir, yours, &c.,  
To MR. E. BURGESS. SUSAN S. SMITH.

Various Cancers, Tumours, Diseased Bones, &c., extracted by the LION OINTMENT AND PILLS; also Photographs of Cases Cured are on view at 117 High Holborn. A guarantee of their virtue.

A good sale for this remedy always follows its introduction by proof of its efficacy. Foreign Houses will do well to order samples through their English agents, also supplies of Bills, PHOTOGRAPHS OF CASES CURED, &c., which ALWAYS ensure a connection.

The Ointment is put up in air-tight, grease-proof boxes, and will keep good any length of time in any climate. The Pills are in stout wooden boxes, and also retain their virtue for years. Prices, 1s. 1½d., 2s. 9d., 4s. 6d., 11s., and 22s. each.

USUAL WHOLESALE TERMS.

## E. BURGESS,

117 HIGH HOLBORN, and KINGSGATE ST., LONDON, W.C.

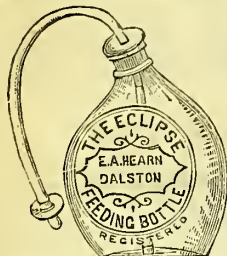
Late WANDSWORTH, S.W.



**Feeding Bottles.**

THE "ECLIPSE."

Fitted with Boxwood or China topped Corks.



White Fittings, 30s. per gross; best Black Fittings, 36s. per gross.

Fitted with best Screw Glass Stoppers, 6s. per gross extra.

The above are put up in one dozen wood-partitioned boxes.

Spare Bottles or Fittings at lowest prices. Liberal discount to large buyers.

# HEARN, RIDDELL & CO., GLASS BOTTLE MANUFACTURERS,

381 KINGSLAND ROAD, LONDON, E.

GLASS BOTTLES of EVERY DESCRIPTION, either PLAIN or STOPPERED, made in WHITE, BLUE, AMBER, ACTINIC GREEN, or any other colour required.

SCREW NICKEL CAPPED POMADES, HONEY POTS,  
JELLY JARS, &c., &c.

SPECIAL ATTENTION GIVEN TO QUALITY.

*Quotations Post Free to any part of the world on Application.*The above will be found the BEST and CHEAPEST  
House in the Trade.**"OUR LITTLE PETS  
Feeding Bottle.**

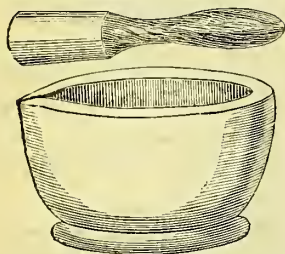
Fitted with best Porcelain Cap or Screw Glass Stoppers.



White Fittings, 78s. p. gross; Black Fittings, 84 per gross.

Each Bottle, with two Brushes in handsome cardboard box, bearing our Copyright Label.

Spare Bottles or Fittings lowest prices. Liberal discount to large buyers.

**WEDGWOOD**

ACID-PROOF

**MORTARS AND PESTLES**

ALSO MANUFACTURERS OF

Funnels, Evaporating Pans, Electric Battery Fittings, Bed Pans, Urinal Medicine Spoons, Physic Cups, Sick Feeders, Bleeding Basins, Medicine Measure Eye Cups, Inhalers, Nursery Lamps, Wall Tiles, &amp;c.

*Price List on application. Special quotations for large orders. Every article stamped "Wedgwood."***JOSIAH WEDGWOOD & SONS, ETRURIA, STOKE-ON-TRENT**

LONDON ROOMS: ST. ANDREW'S BUILDINGS, HOLBORN CIRCUS.

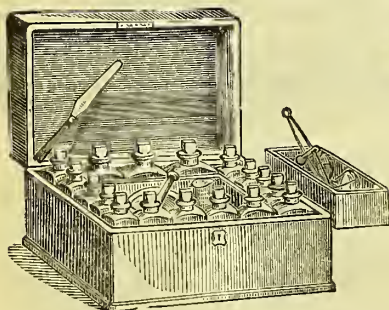
**E. BENTLEY & SONS,**

MANUFACTURERS OF

**MEDICAL GLASS, DRUGGISTS' SUNDRIES  
AND  
MEDICINE CHESTS.**

Also Inventors of the New Opal Glass Pots for Dispensing, &amp;c.

ILLUSTRATED CATALOGUE ON APPLICATION.

14 Tabernacle Street, and 1 & 2 Hill Street, Finsbury  
LONDON, E.C.**SHOP BOTTLES & JARS**

WITH VITRIFIED (burnt in) LABELS

*(Black letters on a ground of pink or white enamel).*

Narrow-mouthed and Wide-mouthed Bottles, well stoppered; Capped and Tube-stoppered Oil Bottles; Syrup Bottles, with Plug Stoppers of Dark Blue or White Opaque Glass; Lozenge Jars with Cut Glass Knobs; Cut Perfume Bottles, Round, Oval, and Square; Shop Jars of Best Porcelain, thoroughly Greaseproof. Labels Indestructible and of Elegant Appearance, forming an even surface with the Glass or Porcelain. PRICE LIST ON APPLICATION. A Large Variety of Samples on Show at

**H. POTHS & CO.,**

4 SUGARLOAF COURT, 50 LEADENHALL STREET, LONDON, E.C.



Amongst others the following have been supplied with these Bottles and Jars:—Bradford & Co., Bridlington Quay; Birks, N. & W. H., Adelaide S. A.; Büchner, M., 124 High Street, Whitechapel, London, E.; Brown, Alex., Dunoon, N. B.; Corry, T. C. S., Dr., Belfast; Cottingham, W., Lincoln; Croydon, E. H., Newcastle-under-Lyme; Davis, Hayton, High Harrogate; Donovan, Richard, Blackrock, near Dublin; Durrant, G. R., Hertford; Ha Ralph, 552 Kingsland Road, London, N.; Hill, J. B., Auckland, N. Z.; Jenkins, J. T., Nottingham; Jones & Co., Christchurch, N. Z.; Lofthouse, J. Fleetwood; Pasmore, W. F., 820 Regent Street, London; Potts, Charles, Ilkeston; Proctor, Wm., & Son, Newcastle-on-Tyne; Roberts, D. P., Croydon Surrey; Robinson, C. J., Streatham, London; Robinson, H., Bailden, near Leeds; Southern, J., Manchester, opposite the Assize Court; Taylor, P. 14 Basinghall St., London, E.C.; Twinberrow, W., & Son, 80 Wigmore Street, London, W. Waterall, Geo., & Sons, Nottingham.



PRIZE MEDALS, INTERNATIONAL EXHIBITIONS.



LONDON, 1862.



PARIS, 1875.



PHILADELPHIA, 1876.



PARIS, 1878.



SYDNEY, 1879.



MELBOURNE, 1880

**KILNER BROTHERS,**

MANUFACTURERS OF

**GLASS BOTTLES,****VAN BOXES, CASES, &c.,***Respectfully invite attention to the following Goods that they supply:***DISPENSING BOTTLES**—All kinds in GREEN and WHITE FLINT GLASS.**FEEDING BOTTLES**—"OUR BABIES' BOTTLE," in GREEN and WHITE GLASS.  
"OUR DARLINGS' BOTTLE," in WHITE GLASS.  
Fitted in a variety of styles.**PERFUMERY BOTTLES**—Many kinds in WHITE FLINT GLASS.**CHEMISTS' BOTTLES**—Numerous varieties in PALE GREEN, BLUE, and WHITE FLINT GLASS.**SUNDRIES**—IN GLASS AND EARTHENWARE; CORKS; PARCELS-POST BOXES, &c.Also Wholesale Druggists', Oil, Tap, Pickle, Sauce, Vinegar, Wine, Spirit,  
Beer, Mineral Water, Ink, Gum, and other Bottles, Syphons,  
Van Boxes, Cases, &c.**NOTICE.**We have been appointed Agents for E. B. ESTES & SONS,  
Turned Wood Box Manufacturers, of NEW YORK, and invite  
Orders and Correspondence for all their goods.

ORDERS FROM THE HOME OR FOREIGN TRADE WILL HAVE CAREFUL ATTENTION.

**KILNER BROTHERS,**

No. 3 GT. NORTHERN GOODS STATION, KING'S CROSS, LONDON



# ESCHMANN BROS. & WALSH,

INVENTORS AND MANUFACTURERS OF THE

## Soft Silk Flexible Catheter

WITH WOVEN EYES.

TO BE HAD OF ALL SURGICAL INSTRUMENT MAKERS AND WHOLESALE HOUSES.

THE PROPRIETORS OF THE  
"W" BRAND  
DISPENSING BOTTLES

Beg to call the attention of their  
numerous supporters to their correct

REGISTERED TRADE MARK,



TRADE MARK.

as they learn with regret that inferior bottles have been shipped with a Mark imitating theirs. The Proprietors continue to supply their bottles only through the best London Wholesale Houses, as heretofore, and give notice that they will take action against makers using a colourable imitation of their Trade Mark.

**DISPENSING BOTTLES & PHIALS**  
MADE OF PURE METAL.

*I. ISAACS & CO., Glass Bottle Manufacturers*

Beg to state that they have greatly improved the quality of their Bottles, and supply them at the following greatly reduced prices—

Green FLINT, Flat or Oval, Plain or Graduated.			
3 and 4 ounce ..	8/ per gross.	12 ounce ..	13/ per gross.
6 and 8 ounce ..	8/6	16 ounce ..	16/ "
White Moulded Phials of Superior Quality.			
1/2 ounce and under	4/ per gross.	1 1/2 ounce ..	5/ per gross.
1 ounce ..	4/6	2 ounce ..	6/ "
3 ounce ..	..	..	7/6 per gross.

Plain or Graduated to Teaspoon.  
All the above are first-rate quality. In ordering, please say "PURE METAL BOTTLES." A Sample Bottle of any kind forwarded free on application. Country packages, 1/ each. Bankers, London and Westminster. Established upwards of 50 years.

*I. ISAACS & CO., Glass Bottle Manufacturers,*  
25 Francis Street Tottenham Court Road, London.

**ROBERT GRAESSE,**  
*RUABON.*

MANUFACTURER OF

**CARBOLIC ACID, PICRIC AND AURIN.**

SPECIALITY—

**PURE CARBOLIC CRYSTALS**

40 DEGREES CENTIGRADE, IN

**DETACHED and ICE CRYSTALS.**

## HENRY'S CALCINED MAGNESIA

Continues to be prepared with scrupulous care in the greatest chemical purity, by

**Messrs. THOMAS & WILLIAM HENRY, 11 East Street, St. Peter's, Manchester.**

And is sold in bottles, authenticated by a Government Stamp bearing their Names and Trade Mark, "Henry's Calcined Magnesia."

Price 4s. 6d., or 2s. 9d.

NEW YORK—MESSRS. J. & S. FERGUSON, Pine Street. PARIS—MESSRS. ROBERTS & CO., 23 Place Vendôme.

**WHITE & CO.,** SUCCESSORS TO **E. GOULD & SON,** 20 BISHOP'S ROAD, LONDON, W.

(Mr. WHITE many years Manager to Messrs. E. GOULD & SON at above address), (ESTABLISHED 1863.)

**MANUFACTURERS OF HOMŒOPATHIC MEDICINES & SPECIAL PREPARATION**

Books, Medicines, Cases, Cardboard Goods, Bottles, Corks, and all Material required in Homœopathy  
Supplied in any quantity at lowest possible prices consistent with purity of manufacture and superior quality

CERTIFICATE OF MERIT, LONDON, 1881.

## W. H. LLOYD & CO.,

PATENTEES & MANUFACTURERS OF EVERY DESCRIPTION OF

## BRONCHITIS KETTLES, FOOD WARMERS, NIGHT LAMPS & SPIRIT LAMPS

HIGH STREET, HARBORNE, BIRMINGHAM.

Whole sale Agents: S. Maw, Son, & Thompson, London.



**BREFFIT'S**

(LIMITED)

**AIRE & CALDER BOTTLE CO.****GLASS BOTTLES.****GLASSWARE SUNDRIES.**

P A T E N T

**AERATED WATER BOTTLES.****VAN BOXES, CASES, & CRATES.****PATENT MEDICINE PROPRIETORS**

Will find we have special facilities for producing great variety of Bottles in many attractive and useful shapes.

**PERFUMERY FACTORS**

We supply some 9,000 various patterns in clear Crystal Glass, plain or stoppered. Special facilities for making lettered Bottles, with Name, Address, Trade Mark, &amp;c.

**PATENT CAPPED POMADES**

Fitted with Glazed Earthenware Corrugated Edge Caps, forming clean, effectual, and everlasting stopper, in 1, 1½, 2, 3, 4, 6, 8, 10, and 12 oz. sizes, in 1 doz. Card or Wood Boxes. Customer's Name, Address, Trade Mark, &amp;c., printed on 5-gross lots.

**GLASSWARE SPECIALITIES:****CHLOROFORM, ETHER, OIL & SYRUP BOTTLES, CHEMICAL APPARATUS, JARS, &c.**

SAMPLES, PRICES, ETC., UPON APPLICATION.

OFFICES AND SHOW-ROOMS—

**83 UPPER THAMES STREET, LONDON.**

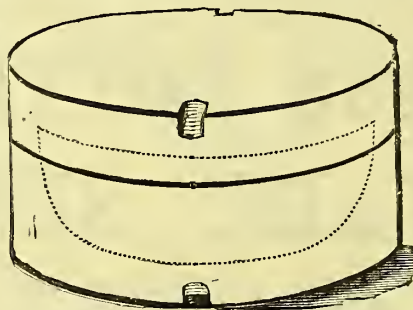


# TOOGOOD'S NEW REGISTERED EARTHENWARE COVERED POTS

ARE CLAIMED TO BE THE MOST PERFECT AND CONVENIENT YET OFFERED TO THE TRADE, AND POSSESS THE FOLLOWING ADVANTAGES:—

1st.—An India-rubber Band passed vertically over the pot is kept in its place by the notches, and effectually secures the lid; for travelling this supplies a want greatly needed.

2nd.—The Covers being made quite flat, labels can be affixed with ease, and without creasing.



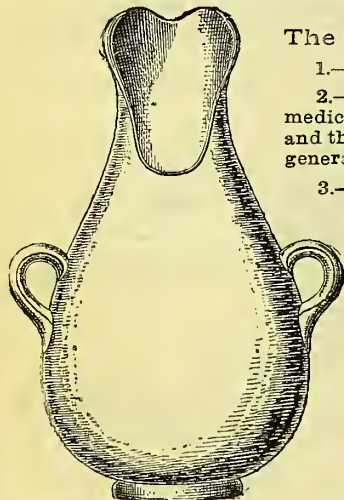
3rd.—The inside of the Pots being rounded or egg-shape, the contents can be entirely removed without waste.

4th.—Great attention has been paid to insure accuracy of contents.

PRICES. {  $\frac{1}{8}$ /- 18/-  $\frac{1}{4}$ /- 18/-  $\frac{3}{8}$ /- 20/- 1 22/-  $1\frac{1}{2}$ /- 24/- 2 27/- 3 34/- 4 42/- 6 54/- 8 oz. 66/- per Gross.

## DR. SPENCER THOMSON'S ORO-NASAL STEAM INHALER. (PATENTED.)

For use in the Relief of Asthma, Hay Fever, &c.



The advantages of this Inhaler are:—

- 1.—Simplicity and Cleanliness.
- 2.—The application of the vapour, simple or medicated, to the membranes not only of the mouth and throat but also of the nostrils and air passages generally.
- 3.—Perfect ease of inhalation, contrasting with the efforts required in the use of Oral Inhalers in general.

### PRICES.

In Terra Cotta ... .. 48s. dozen  
In White Earthenware - 33s. „

### PRESS OPINIONS.

“For the relief of Asthma, Hay Fever, &c., this Inhaler offers particular advantages.”—

*British Medical Journal*, October 25, 1884.

“It is an improvement on the old kinds.”—

*Chemist and Druggist*, November 15, 1884.

“This Inhaler has much to commend it to popular use.”—*Knowledge*, November 28, 1884.

## THE WESTMINSTER FEEDING BOTTLE.

(SCREW GLASS STOPPER.)



THE 1s. WHITE GLASS—  
WHITE FITTINGS .. 7/8 DOZEN.  
BLACK FITTINGS .. 8/6 „  
THE 6d. GREEN GLASS—  
WHITE FITTINGS .. 4/- „  
BLACK FITTINGS .. 4/9 „

MANUFACTURED BY

## WILLIAM TOOGOOD,

WHOLESALE GLASS BOTTLE MANUFACTURER & DRUGGISTS' SUNDRYMAN,  
35, 36, & 37 MOUNT STREET, GROSVENOR SQUARE, LONDON, W.

WILLIAM TOOGOOD'S REVISED PRICE CURRENT of Glass Bottles, Measures, Earthenware, Druggists' Sundries, &c., will be forwarded post free upon application.

SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.



# TRUSSES.

## LINDSEY & SONS.

THE BEST HOUSE FOR LONDON-MADE TRUSSES  
OF SUPERIOR QUALITY AND FINISH AT LOWEST  
TRADE PRICES.

**WHOLESALE AND FOR EXPORT.**

ILLUSTRATED LIST POST FREE TO ANY ADDRESS.

ELASTIC GOODS, SUSPENDERS, BELTS, AND SURGICAL BANDAGES.

32 LUDGATE HILL—40 GRACECHURCH STREET, LONDON.

Estab. 1832. **TRUSSES.** Estab. 1832.

The BEST and CHEAPEST LONDON-MADE TRUSSES in the Market are  
Manufactured by

## H. M. COLWELL.

ELASTIC STOCKINGS, SUSPENDERS, & SURGICAL BANDAGES OF ALL KINDS.  
WHOLESALE AND EXPORT.

The largest Shipper in the Trade.

Illustrated Price List on Application.

MANUFACTORY: 116 NEWINGTON CAUSEWAY, LONDON, S.E.

ESTABLISHED 1814.

**W. A. SCOTT, 2 HOWARD STREET, SHEFFIELD,** MANUFACTURER OF **SURGICAL INSTRUMENTS,**

Trusses, Elastic Stockings, Knee Caps, Ladies' Belts, Gents' Riding Belts, Magnetic Belts and Appliances, Bandages, Deformity Instruments, Artificial Limbs, Enemas, &c., &c. Trusses from 12/ per dozen; Elastic Stockings, 4/ per pair; Inhaler and Respirator Combined, 24/ per dozen.

N.B.—All our Trusses are hammered to Shape of the Body, and made of Best Sheffield Steel. Samples sent on application. The Cheapest House in the Trade.

## HAYWOOD'S SURGICAL APPLIANCES.



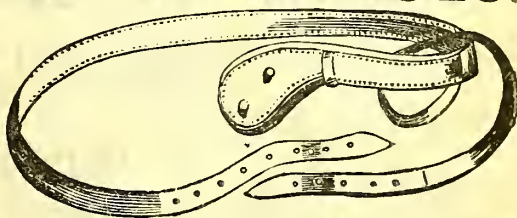
A. Improved Knitted  
Chest and Back Protector.



B. Improved Knitted  
Chest and Throat Protector.



C. Elastic  
Stockings.



D. Trusses.

Greatest attention paid to Special  
Orders, which are invariably  
forwarded per return of post.



E. Suspensory Bandages.

List of Prices and Directions for Measurement forwarded on application.

**J. H. HAYWOOD, Castle Gate, NOTTINGHAM.**



**LINT.**  
**GAMGEE TISSUE.**  
(PATENT ABSORBENT GAUZE AND  
COTTON WOOL.)

**ABSORBENT  
COTTON WOOL.**

**ROLL BANDAGES.**

**ROBINSON & SONS,**  
COTTON SPINNERS AND MANUFACTURERS OF  
**SURGEONS' LINTS, COTTON WOOLS,  
AND BANDAGES,**  
**WHEAT BRIDGE MILLS,  
NEAR CHESTERFIELD.**

Depot—55 Fann Street, Aldersgate Street, London.



# OLD-FASHIONED FINE HAND-MADE LINT,

No. 5, AS SUPPLIED TO THE GOVERNMENT HOSPITALS, 4s. per lb.

SPECIAL QUOTATIONS TO LARGE BUYERS

S. MAW, SON & THOMPSON, LONDON.

## THE SURGEONS' LINT.

V.B. QUALITY.

The superior quality of NEWSOME'S ABSORBENT SURGEONS' LINT is universally admitted.

The V.B. Quality is quite pure and of great superficial area and exquisite softness.

The C. Quality is equally absorbent and pure, but stronger in fabric.

Newsome's Bleached Rolled Bandages, 3 in., 2½ in., 2 in. Also Surgical Absorbent Open Bandages.

Specially Bleached Grey Carded Cotton Wools, Absorbent and Bleached and Grey Waddings; also  
Sheet Waddings, Tow, &c.

THE TRADE SUPPLIED THROUGH THE LONDON AND PROVINCIAL WHOLESALE HOUSES, OR FROM

**C. NEWSOME,** Spinner and Manufacturer, Jersey Street Mills, Ancoats, **MANCHESTER.**

London Agents: B. PRATT & CO., Wood Street, E.C.

**BELLADONNA  
POROUS PLASTERS.**

**24s. per gross.**

SUBJECT.

Samples on Application.

**EDWARD TAYLOR,**  
MANUFACTURER OF ALL KINDS OF  
**MEDICAL, SURGICAL & MARGINAL PLASTERS**

For Home Trade and Export to all climates.

**ISLINGTON SQUARE, SALFORD, MANCHESTER.**

[ESTABLISHED 1847.]

Samples and Quotations on Application.



ALL KINDS OF  
**SPREAD & MARGINAL  
PLASTERS,  
MUSTARD PLASTER,  
CORN PLASTERS  
WOVEN BANDAGES,  
&c., &c.  
BEST QUALITY.**

**FRANCIS'  
BRONCHIAL PROTECTOR.**  
REGISTERED TRADE MARK.  
Best preventive and cure of Bronchitis, Asthma,  
Winter Cough, Tight Breathing, and all Throat  
Complaints. 13½d. and 2s. 9d.  
MANUFACTURED BY  
**A. de ST. DALMAS, LEICESTER.**  
Formerly MOOR,



ADDRESSED TO CHEMISTS AND DRUGGISTS. AGENTS WANTED.

**DR. HENRY A. MARTIN'S  
PURE RUBBER BANDAGES (GENUINE),***For the Radical Cure of Varicose Veins, Weakness, Ulcers, Eczema, and other Diseases of the Leg, and  
for Injuries of the Knee and Ankle Joints.*

y far superior to any of the numerous imitations; are now being sold at less cost than those of other manufacturers

**TESTIMONIAL:**

To MESSRS. KROHNE &amp; SESEMANN.

GENTLEMEN,—I have the greatest pleasure in acceding to your request, that I should, from my experience of the Martin's Bandages, testify respecting their excellence.

My knowledge of the quality of Bandages of English make is limited: for having, about fifteen months back, applied bandages sent to me from this source, and noting the evident irritation and discomfort produced by them—so great, indeed, that each patient soon discontinued their application—I ceased to recommend and use them.

In April of this year, I for the first time used the original Martin's Bandage, and since then I have applied them and none else to the limbs of nearly twenty persons suffering from a variety of complaints, such as ulcers of the leg of old standing, which had resisted all treatment for more than fifteen years; varicosities (the unsound leg of one patient, a man, measured 25 inches round the calf, against 16½ inches, the size of the sound leg; and his condition was such that, before coming under my care, it had been by his former attendant seriously debated whether or not the leg should be amputated to save life. This man goes about wearing a 21-foot Bandage, and the calf of the unsound leg now measures 18 inches); erysipelas, oedema, rachitis, &amp;c.

Suffice it that all, both young and old, have been enabled to wear them with comfort; most of the cases under treatment have been cured, all benefited, and many, although well, continue to wear them on account of their safety and the support they give rise to.

I may appear to have said too much in their favour. I can assure you that my feeling is that I have said too little. The great success attending their use evidently arises from the excellent purity, smoothness, impermeability, and non-irritating nature of the India-rubber of which each Bandage is composed.

I am, &amp;c.,

EDWARD C. ANDERSON, M.D., M.A., Cantab.

**CAUTION TO THE TRADE.**—The Sole Agents for the Genuine Martin's Bandages request the Trade to compare their Prices with those commonly charged for worthless imitations, which are advertised as "Recommended by Dr. Martin," or as "Suggested by Dr. Martin," which is misleading, the vendors having not the shadow of a title to use Dr. Martin's name in connection with their bandages. Each GENUINE BANDAGE stamped with Dr. H. A. Martin's signature is warranted to be perfect in every respect, and to wear well.**For the Leg, from the Foot to below Knee.**—No. 1, thick, 7/3; No. 1A, medium, 6/; No. 1B, thin, 4/3.**For the Leg from the Foot to Groin.**—No. 2, thick, 16/6; No. 2A, medium, 13/; No. 2B, thin, 10/.**For the Knee-joint and Thigh.**—No. 5, extra thick, 5/; No. 6, extra thick, 7/9; No. 7, medium, 7/6.**For the Ankle, Wrist, and Forearm.**—No. 3, thick, 3/6; No. 3A, thin, 2/9.

Prices subject to 20 per cent. discount. Special Terms for Export to Shippers and Colonial Agents.

For other sizes see complete Price List; also Dr. H. A. Martin's Pamphlet, describing Method of Treatment, which are sent Post Free on application to the Sole Wholesale Agents for Europe, Asia, Africa, and Australia,

**KROHNE & SESEMANN, SURGICAL INSTRUMENT MAKERS,  
8 & 38, DUKE STREET, MANCHESTER SQUARE, LONDON.**

Also Sole Agents for the Sale of Dr. H. A. Martin's Adhesive Plaster. Agents for the International Society for the Manufacture of Wound Dressing Materials (Limited), Schaffhausen. Patentees of Dr. Siegle's Steam Spray Inhaler, the New Pliable Metal Temperature Regulators, and Dr. Paquelin's Thermo Caustere, &amp;c.

**FRENCH SCREW GLASS POTS & BOTTLES,  
WITH METALLIC NICKELLED CAPSULES.**

The above new method (first introduced by G. V. De Luca) excels all others for neatness and elegance, and is specially adapted for export. Made in various new designs. Specialité for Bottles for all kinds of Confectionery, Essences, Manufacturers and Sundries. N.B.—Beware of imitations sold at cheap prices, the capsules being a mixture of lead or tinned iron.

Manufacturer of the GLASS POMADE POTS WITH GLASS COVERS, in Opal White and White Flint in all sizes.

**G. V. DE LUCA, French Flint Glass Manufacturer, 6 and 7 Long Lane, LONDON, E.C.**

WHOLESALE AND EXPORT AGENTS—S. MAW, SON &amp; THOMPSON, 7 to 12 ALDERSGATE STREET, LONDON, E.C.

Illustrated Catalogue for Patent Screw Capsule on application.



8 ozs., 10 ozs., 13 ozs., 20 ozs., &amp; luca, this shape pot.



MANUFACTURERS OF

**THE LIVERPOOL PATENT LINT CO.,**  
**PATENT FLAX & COTTON LINTS,**  
WHITE AND GREY BANDAGES,  
ABSORBENT AND CARDED COTTON WOOLS, STYPTIC TOW.  
MARK STREET MILLS,  
NETHERFIELD ROAD NORTH, **LIVERPOOL.**



DRUGGISTS' SUNDRIES DEPARTMENT.

# INDIARUBBER POROUS PLASTERS

TRADE MARK.



WE have great pleasure in informing our friends that we have been successful in manufacturing and spreading Plasters in Indiarubber combination. The quality is guaranteed, and in appearance they are quite equal to anything offering at present on the market, and we feel sure from the popularity the Indiarubber Plasters have attained, and the reasonable price at which we offer them, our friends will be enabled to effect good sales. They are put up in fancy boxes, containing two dozen, and each Plaster is put in a separate envelope, which is not closed at one end, so that at pleasure the Plaster can either be sent out with simply the muslin facings on it, no name being on the Plaster itself, or with the printed envelope. The size of the Plaster is  $7\frac{1}{2}$  by 5 inches.

## PRICES:—

Strengthening ... .. 2/8 per dozen.  
Belladonna or Capsicum ... .. 4/- „

In One Yard Rolls—Belladonna or Capsicum, 2/6 per yard; Strengthening, 2/- per yard.

SPECIAL DISCOUNT TO BUYERS OF QUANTITY.



## POROUS



## PLASTERS ON FELT

The Proprietors have much pleasure in calling the attention of the Trade to the above, which possess the following advantages, and are sure to command a large sale:—

They Soil the Clothing less than any other Plaster—an important point in the case of Belladonna. They are more comfortable to wear, are more slightly, and adhere as well as any Plaster. They are Porous—hence ventilating—and being of red felt are at the same time exceptionally warm. They are as pliable as Leather, yet cannot wrinkle, which is so often the cause of disagreeable itchiness. They are as cheap as Leather Plasters.

### ARE SUPPLIED AS FOLLOWS, EITHER HEART OR LONG SHAPE:—

Roborans and Strengthening	...	...	...	...	2/-	2/8	4/-	6 - doz.	} HEART OR } LONG SHAPE
Belladonna and Capsicum	...	...	...	...	2/8	4/-	6/-	8 - „	

Samples can be had on application. Usual discount. Special quotations to large buyers.

### SOLE PROPRIETORS:

EVANS, SONS & CO., LIVERPOOL,

LONDON:

EVANS, LESCHER & WEBB,

CANADA:

EVANS, SONS & MASON (LIMITED),  
Montreal and Toronto.

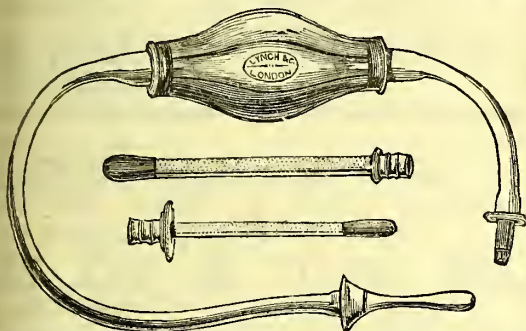
N.B.—Special attention is drawn to the Revised Issue of our Druggists' Sundries List of January 15, and to the Circular contained therein.



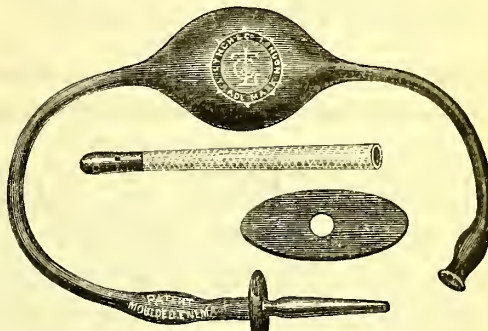


TRADE MARK.

# LYNCH'S



No. 436.



No. 435 D.

# ENEMAS.

## SUBJOINED ARE PRESENT PRICES:

										£	s.	d.
433A.	HIGGINSON'S, unvarnished india-rubber, with rectum pipe only, in slide cedar boxes	...	...	...	...	...	...	...	per doz.	1	5	0
433B.	Ditto, with elastic-gum vagina pipe and leather shield	...	...	...	...	...	...	...	"	1	10	0
434.	Ordinary Higginson's, barrel shape, with bone rectum pipe, elastic gum vagina pipe, to plug on, and patent leather shield, in slide cedar box	...	...	...	...	...	...	...	per doz.	1	12	0
434AA.	Ditto, fitted with vagina pipe with reversed current	...	...	...	...	...	...	...	"	1	16	0
434A.	Ditto, ditto, with disconnecting mounts	...	...	...	...	...	...	...	"	1	14	0
435C.	LYNCH'S (Higginson's principle), black, green, red or white india-rubber, requiring no metal mounts, in one continuous piece, warranted not to split, fitted with vulcanite rectum pipe, in slide cedar box	...	...	...	...	...	...	...	per doz.	1	10	0
435D.	Ditto, with elastic-gum vagina pipe, and leather shield, in slide cedar box	...	...	...	...	...	...	...	"	1	15	0
436.	LYNCH'S FAMILY (Higginson's principle), fitted with bone bulb-pointed rectum pipe for adults, elastic-gum vagina pipe, and elastic-gum rectum pipe with bone shield for children, in mahogany box	...	...	...	...	...	...	...	per doz.	2	8	0
437.	Ditto, in slide cedar box	...	...	...	...	...	...	...	"	2	2	0
437A.	LYNCH'S PERFECTION, in mahogany box	...	...	...	...	...	...	...	"	2	16	0
437B.	Ditto, in slide cedar box	...	...	...	...	...	...	...	"	2	10	0
437C.	Ditto, in superior mahogany box, with lock and key	...	...	...	...	...	...	...	"	3	12	0
437D.	Ditto, in oval boxes of cloth and leather	...	...	...	...	...	...	...	"	2	15	0
437E.	LYNCH'S COMPLETE HOUSEHOLD SYRINGE, consisting of Higginson's Enema with disconnecting mounts, fitted with bone bulb-pointed rectum pipe for adults, elastic-gum rectum pipe with bone shield for children, elastic-gum vagina pipe, and bone pipes for ear, eyes, and nose, in mahogany box	...	...	...	...	...	...	...	each	0	7	6

Discount—10 per cent. Monthly, 5 per cent. Half-yearly Account.

SPECIAL QUOTATIONS FOR 12 DOZEN AND UPWARDS.

## LYNCH & CO.,

Wholesale and Export Chemists and Druggists' Sundriesmen,  
Surgical Instrument Makers,

DEALERS IN PATENT MEDICINES, PERFUMERY, AND PROPRIETARY ARTICLES,

## ALDRSGATE STREET, LONDON, E.C.

Australian Branch—15 Vaughan's Chambers, 48 Queen Street, Melbourne.

SOLE AGENT, MR. RIVERS LANGTON.





# ADDRESS CARDS.



**SAM<sup>L</sup> LAMBERT & CO.,**  
DRUG, OIL, AND CHEMICAL BROKERS,  
132 Fenchurch Street, London, E.C.

AGENTS FOR  
Fratelli de Pasquale & Co., Messina. Fridr. Jobst, Stuttgart.  
I. Bernhardt, Leipzig.

**FRED<sup>K</sup> FINK & CO.,**

10 & 11 MINCING LANE, LONDON, E.C.

SPECIALITIES: Glycerine—Gum Arabic—Gum  
Tragacanth—Pure Beeswax—Honey—Quinine.

Estab. 1847. **F. L. BITTNER,** Estab. 1847.

BRÜNN, MORAVIA, AUSTRIA.  
ROOTS, HERBS, BARKS, &  
FOR EXPORT.

**A. H. RIISE,**  
APOTHECARY HALL, ST. THOMAS, WEST INDIES  
(Established 1836).  
Manufacturer of the **DOUBLE DISTILLED**  
**BAY SPIRIT OR BAY RUM.**

Consignments and Agencies for New Remedies, Specialties,  
Patent Medicines, Druggists' Sundries, Perfumery, &c., &c., solicited.

**E. BRAMWELL & SON,**  
ST. HELENS, LANCASHIRE.  
EPSOM SALTS (PURE).

CREAM CAUSTIC SODA.  
SULPHITE OF SODA,  
PHOTOGRAPHIC AND COMMERCIAL.



**BUTTER COLOURING & CHEESE RENET.**

AGENTS AND CORRESPONDENTS:  
ALFRED CHOLLET, Samur. ALEX. BRANDS, Hamb.  
W. & N. BLANDOFF & Co., GILLES HOEN, Battice.  
Moscow. A. MICHELET, Christiani.  
CANEPA & RICHINI, Genoa. KUYPER & Co., Rotterdam.  
HERMAN FISSEL, Waga. DOBBIN, OGILVIE & CIE, St.  
VICTOR FORELUS, Abn. WILL. ADAMSSON & Co., Gothen-  
HAGE, Blom & Co., New York. bourne.  
**MEYER & HENCKELS,**  
Manufacturers, COPENHAGEN (Denmark).

**PETROLEUM**  
**JELLY,**

EQUAL TO AND CHEAPER THAN VASELINE.  
SANITARY FLUID AND SHEEP DIP,  
THE CHEAPEST AND BEST DISINFECTANT.  
GREASE, PITCH, ASPHALTE, AND ALL PRODUCTS OF TAR AND ROSIN.  
*Samples and Prices on application.*  
**GRINDLEY & CO., POPLAR, LONDON, E.**

**EUCALYPTUS TOILET VINEGAR**

As supplied to H.R.H. the late Duke of Albany.  
**NICHOLLS & PASSERON,** Chemists, Nice, France.  
Wholesale Agents: **SANGER & SON,** Oxford St., LONDON.

ESTABLISHED 1873.  
**FRANCIS J. W. POLGLASE,**  
(Successor to the Tyne Vale Chemical Company),  
TYNE VALE CHEMICAL WORKS, FORTH BANKS, AND SKINNER BURN ROAD,  
NEWCASTLE-UPON-TYNE.

Having for many years given special attention to the manufacture of  
**ETHERS,**  
Is enabled to offer highly favourable terms to large buyers. Quotations on appli-  
cation.

**EXPORTERS OF**  
**GREEK PRODUCTS.**

Dry Raisins, Aniseeds, Cummin Seeds, Linseed, Cotton, Olive  
Oil, Honey, Sponges, Skins of Lambs, Kids, and Hares.  
Importers and Representatives—  
**KIRIACOS & CO., PIRÆUS, GREECE.**

**INFALLIBLE DESTRUCTION**  
OF  
Bugs, Fleas, Lice, Flies, Gnats, Cockroaches,  
Mites, Ants, Caterpillars, Weevils, &c.  
**E. GALZY, Manufacturer,**  
**28 RUE BUGEAUD, LYONS.**  
*Price List and Descriptive Album sent on receipt of post-paid applications.*

**PLANTAIN BONBONS & JUICE,**  
For Coughs, Hoarseness, Catarrh, and all other pectoral diseases. Highly esteemed  
and speedy and sure in action. Price 9d. a box, and 1s. 6d. a bottle.  
Pharmacists and Druggists are invited to become Agents.  
GENERAL AGENT REQUIRED FOR GREAT BRITAIN  
**VICTOR SCHMIDT & SONS,**  
MANUFACTURERS TO THE ROYAL IMPERIAL COURT OF AUSTRIA  
78 Allee-gasse, Vienna, 4 B., Austria.

**COLOMBO, CEYLON.**  
**NEIL S. CAMPBELL & CO.,**  
CHEMISTS,

Possess exceptional facilities for the introduction of Novelties and General  
Merchandise. Agencies receive energetic attention.

REFERENCE: MESSRS DICKINSON, AKROYD & CO.,  
30 EASTCHEAP, LONDON, E.C.

**NOTICE.**  
**HORMUSJEE, RUTTONJEE & CO.**  
WHOLESALE AND EXPORT DRUGGISTS,  
Manufacturing Chemists and General Merchants, Importers and  
Exporters of Indian and Persian Products, &c.,  
No. 6 Borah Musjid Lane Fort, Bombay, India.  
Are prepared to accept Agencies for new Specialties, Patent Medicines, Drugs,  
Sundries, Spirits, Perfumery, &c.  
Inventors wishing to have their specialties introduced into India should apply  
to the above firm. We will be glad to give our best attention to their sale, provided  
they are entrusted with the sole agency. Correspondence solicited.



Medical and Sanitary  
Exhibition, 1881.**DIABETES**

AWARD OF MERIT.

**VAN ABBOTT'S GLUTEN BREAD,**

and all other suitable Foods for Diabetic Patients.

Dietary Tables and Price Lists post free on application.

**VAN ABBOTT.** 5 Princes Street. **CAVENDISH SQ., W.**PREPARED SILVERY WHITE GUTTA PERCHA ENAMEL  
FOR STOPPING DECAYED TEETH.**P. A. STEVENS,**

(LATE OF HOXTON, N.)

72 MANSFIELD ROAD

HAVERSTOCK HILL, N.W.,

SOLE PROPRIETOR AND MAKER OF THE

ABOVE.

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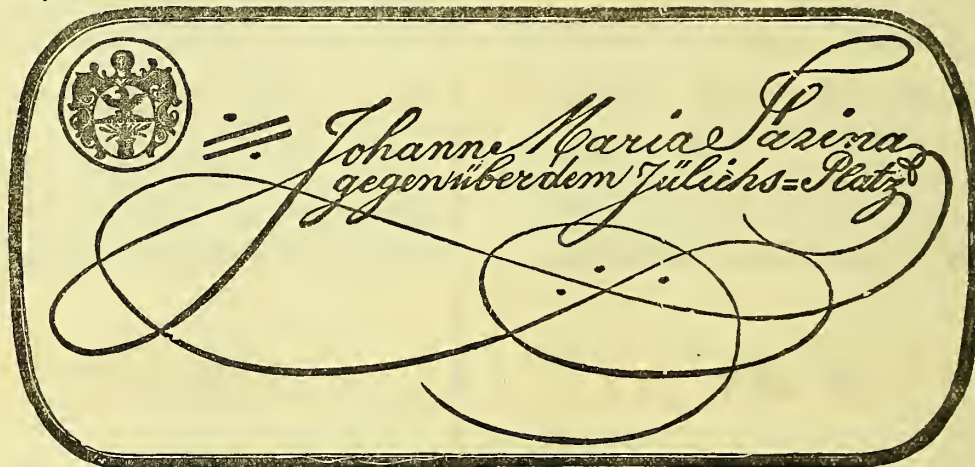
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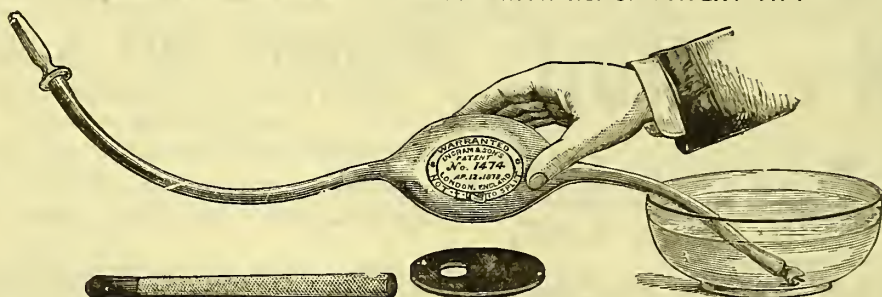
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Favourably noticed in "*British Medical Journal*," December 13, 1879; in the "*Lancet*," January 3, 1880; and in "*British Medical Journal*," September 30, 1882,